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ABSTRACT

The Diversified Satellite Occupations Program Career Development sought to prevent dropout through these strategies: registration at a school situation away from the normal school setting, creation of a close teacher-student relationship, and raise achievement levels and lower anxiety levels. Program emphases at elementary, junior and senior high levels were occupational guidance, work experience, bilingual-bicultural students, and handicapped students. The centers, which had direct contact with 769 students, showed considerable holding power, with only 6.7 percent of students leaving the program without plans. Comparisons between pre- and post-test data yielded fifteen significant changes: six changes were from a more to a less favorable score, and nine were in the positive direction. Nine of these were on the achievement measures, with seven positive and two negative changes. Two positive and two negative changes were measured regarding attitude toward school. Differences between centers were also measured. A third party evaluator concluded that the centers were successful in achieving the objective of increasing non-white enrollment. It was concluded that the dropout-prone disadvantaged student will show attendance and achievement gains if registered in a less structured locale, with a shorter day, combining with work experience. Supporting statistical tables are given. (SC)

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FINAL REPORT

Project No. VO 61056
Contract No. OEG - 0 - 70 - 5176 (361)

Dropout Prevention
Diversified Satellite Occupations Program
and
Career Development

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90 - 576

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June 30, 1973

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The project reported herein was performed pursuant to a contract with the Bureau of Adult, Vocational, and Technical Education, Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

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June 30, 1973

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We wish to make note and express appreciation to our many associates who have given of their time, their counsel, and their skill to the DSOP/Career Development (Dropout Prevention) Program.

Superintendent T. H. Bell; the Board of Education; the Deputy Superintendent, William E. Hutchinson; the Assistant Superintendents of Administrative Services, Dr. John Reed Call, and of the Instructional Services, Dr. Ted T. Peterson have given us district-wide support. The three Assistant Superintendents of the Valley Complexes, Drs. Charles P. Lloyd, Ralf C. Riches and Willis D. Wynn have helped in implementing the program into their areas. The principals and the staffs in the schools, particularly the counseling staffs, have made the concepts of the program come to reality. Clive Jensen, Director of Vocational Education, has always been ready for counsel, direction, and encouragement.

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SUMMARY OF THE REPORT

TIME PERIOD COVERED

July 1, 1970, through June 30, 1973.

INTRODUCTION

The three-year thrust of the DSOP/Career Development program was to prevent dropout through employment of a number of strategies:

1. Registration into a school situation away from the normal school setting either in centers or in self-contained classrooms.

2. Create a close relationship in order to build self-confidence in the students. This made the selection of warm, understanding, creative, and vigorous staff members imperative.

3. Raise achievement levels and lower anxiety levels so that the skills needed for success in lifetime careers could then be introduced.

The "nature" of the dropout prone student needs to be carefully examined. He is he who, by non-attendance, is seldom enrolled in vocational education classes; is seldom prepared or equipped to function successfully when he does attend; is inordinately sensitive to criticism or comment on his person or habits. Thus, the very student on whom cooperative, work study, and work experience programs would have the most impact are seldom in class. This, then, was the rationale behind the development of the DSOP/Career Education centers.

During the three years the DSOP/Career Education Dropout Prevention program has maintained and progressed under the changes inherent in a school system as large as Granite's (60,007 students). We have profited from the expertise of two superintendents, three project directors, two district vocational-education directors, and two project administrators. The initial staff has, however, in the majority, remained.

The major accomplishment of the project is that these students were attending school and that, over all, only 6.7 percent left the program without plans.

EVALUATION

Analysis procedures

Three main analysis techniques were employed in the evaluation of the DSOP project. In order to determine whether significant gains had been made by each center between the pre-test and the post-test on the dependent variables, t-tests for correlated means were computed. In order to determine whether differences in gains among the secondary centers were significant, nineteen two-classification analyses of variance on gains were carried out. These analyses also determined whether students who were in the upper half of each group on percentage of attendance were significantly different than students who were in the lower half on this variable. Analysis of the data from the Redwood Elementary Center was carried out using Wilcoxon Matched-Pairs Signed-Ranks Tests to determine the significance of differences between pre and post-treatment performance of students on each dependent variable. This is a nonparametric analysis technique which is appropriate in view of the fact that there were only eight students with pre-post test data in the elementary center.

Pre Post-Treatment Comparisons

Comparisons between pre and post-test data for each dependent variable in each center yielded fifteen significant changes. Six of these were negative, i.e., indicating the change from a more favorable to a less favorable score, and nine were positive. Nine of these differences were on the two achievement measures, i.e., the Wide Range Achievement Test and the Fundamental Achievement Series. All seven of the significant gains on the Fundamental Achievement Series were positive. The two changes on the Wide Range Achievement Test were both negative, and indicated serious achievement losses in arithmetic and spelling for students at the Western Center.

The Demos D Scale was employed to measure changes in attitude towards school and school related variables. Four significant changes were found on this scale, two favorable and two unfavorable. The Purdue Master Attitude Scale to measure attitude toward any institution was employed to measure student attitude towards the DSOP Center and the regular school. Two significant changes were found on this scale, both in the direction of less favorable attitudes towards the DSOP Centers on the post-treatment administration of the measure.

Between-Center Differences

Analysis of differences in gains made between centers revealed 18 significant differences. For the high school centers, the only significant achievement differences were that the Eastern and Central Center both made significantly greater gains in the WRAT arithmetic and spelling scores than the Western Center. Five differences were found among junior high school centers on the Fundamental Achievement Series. There was no consistent pattern, however, for one center to obtain higher scores than the others, although there was a slight trend favoring the Brockbank Junior High School Center. On the Demos D Scale, there were six significant between-center differences. The first reflected the tendency for the high school students to make more favorable attitude changes than the junior high school students. Among the junior high schools, Kearns Junior High obtained the most favorable scores. There were two significant differences between centers on the Purdue Master Attitude Scale which measured attitude toward the DSOP Centers. The Western Center suffered a significantly smaller net loss on this scale than the Eastern and Central Centers. Brockbank Junior High School made a slight gain on this scale while Kearns Junior High School made a substantial loss. The difference between these two centers was statistically different. On the IPAT Anxiety Scale, there were two significant center differences. On the Portension factor, the Central Center obtained a significantly more favorable score than the Eastern Center, and among the junior high centers, Kearns and Brockbank made a more favorable change than Central Junior High.

The evaluation also included comparisons between students whose attendance at the DSOP Center was above average and those whose attendance was below average. These comparisons yielded only two significant differences. These differences indicated that the students whose attendance at the centers was above average made significantly greater gains on the Fundamental Achievement Series Verbal and Numerical scores than students whose attendance was below average. No other significant differences were obtained in this phase of the analysis.

The Purdue Master Attitude Scale for any vocation was used to determine if the Center's Career Education Programs improved vocational attitudes. This test failed to yield any consistent pattern for students in the DSOP Centers. It appears that the centers have no effect upon vocational attitudes as measured by this instrument.

Closure and Holding Power

The centers showed considerable holding power during the 1972-73 school year. Over 60 percent of the students enrolled were still in the program at the close of the year. Only 6.7 percent of the students dropped the program (reason unknown). The program achieved desirable closure on 27 percent of students enrolled.

Increase in Non-White Enrollment

The high school centers continue to enroll about 5 percent nonwhite students, which is substantially above the nonwhite percentage for the district as a whole (about 3.5 percent at high school level). However, the high school centers have made no gains in this percentage since the initial year of the project (see Table 15). In contrast, the junior high school centers enrolled over 45 percent non-white students during the 72-73 school year, which is more than double the percent enrolled during the initial year of the project. The third party evaluator concludes that the centers have been successful in achieving this objective.

Results for the Redwood Elementary Center were analyzed using the Wilcoxon Match-Pairs Signed-Ranks Test. Results of the Redwood Elementary Center indicated that students had made a significant gain on the WRAT Arithmetic test. There are no significant differences on the pre and post-test means on the WRAT reading or WRAT spelling. Thirteen of the fourteen factors on the IPAT Children's Personality Questionnaire were statistically significant. However, no meaningful pattern appeared from these differences. Of the thirteen directional hypotheses made by the project staff, six were supported and seven were rejected. Students obtained lower post-test scores on all fourteen of the IPAT factors, suggesting that some sort of biasing had occurred in the administration or scoring of this test. The external evaluator checked, but has been unable to determine with any certainty what happened to the results of this test. In view of the questions surrounding this test, it would be unwise to draw any conclusions from the data.

CONCLUSIONS AND RECOMMENDATIONS

Based on the evaluation and observations made during the past three years, we can conclude that the dropout-prone disadvantaged student will show attendance and achievement gains if registered in a less structured locale, with a shorter day, combined with work experience.

The Granite School District Board of Education, through Dr. T. H. Bell, Superintendent, has therefore implemented these findings (combined with those from Project Success and Non-Com) into a district-wide BRANCH program. When fully operational, it will consist of the following components:

1. At least one self-contained classroom in each junior and senior high school, 20 in all--BRANCH-1.

2. Three centers (2 high school and 1 junior high) in a central location for students who wish to attend "away" from school environment--BRANCH-2.

3. Employment of skilled curriculum staff and vocational-education staff to build on the career education concept, work experience, co-op classes, and work study.

Thus, the DSOP/Career Development program which had direct contact with 769 students will now be an integral part of our total secondary system serving 27,726 junior and senior high students.

FINAL REPORT

PROBLEM AREA

A large number of students who leave our high schools do not have the skills necessary for them to obtain even an entry job in the increasingly technical business and industrial world. Without some interest in and knowledge of an occupation, these young people become aimless seekers of unskilled jobs, social problems or recipients of public welfare. Recent research and national studies (Grant Venn's Man, Education and Work; National Committee for NASSP; and others cited elsewhere in this proposal) indicate that the abilities of all children to succeed in an occupation must be and can be developed in our technological society. Other research evidence indicates that some of these occupational abilities and backgrounds related to success are not being developed in today's schools. Programs must be implemented that will help those who have already dropped out of school without the necessary occupational skills as well as stop the dropout flow of those who are still in school. Youth must be assisted in avoiding a pattern of occupational aimlessness or incompetence.

The problem being addressed in this proposal deals primarily, but not exclusively, with the part of the total that relates directly to secondary programs which are designed and intended to enhance the abilities of youth as they prepare for gainful employment. For the most part, the young people for whom these activities are intended are those identified as being dropout prone and not those who are enrolled in present vocational courses or those who are college-bound.

In some instances the lack of adequate vocational guidance programs in the secondary schools has contributed to the complexities of the problem. In others the lack of appropriate vocationally oriented programs has been the contributor. In still others, the environmental influences of family, social conditions, economic conditions and "school" conditions have compounded the problems.

It is also vital that an adequate "occupational outlook" program be provided in earlier years of schooling. It is important that each elementary age child receive an orientation and develop an understanding as to how adults achieve productive stations in society. The research concurrent with Title VIII of the Elementary and Secondary Education Act of 1965 confirms this contention, ". . . that children begin to drop out of school long before they reach the secondary level of education. Attention should be paid to the earlier levels of education,

for the roots of the problem are often found at these educational levels."[1]

Underlying all these factors in the Granite School District is the District's position as a relatively poor district financially, when Granite is compared with neighboring districts in Utah as well as across the nation. Granite School District is suburban to Salt Lake City and is Utah's largest with a student population of more than 63,000 children. This comprises approximately one-fifth of the state's school age population. The Granite School District is taxing at its legal limit and has the highest school tax rate of all Utah's forty school districts. The neighboring district to the north generates $14,354 per distribution unit when considering funding at all levels--local, state, and federal. The neighboring district to the west receives $12,346 per distribution unit when considering the same sources of revenue. The comparable figure in Granite School District is but $11,320. Considering these revenues on a per child basis, the Granite School District is able to provide a program for its children based on $499 per child whereas the Utah average is $534 per child. The figures for the two neighboring districts are $611 and $528, respectively. The NEA estimate of average expenditure per child nationwide for 1968-69 was approximately $680.[2] This restricted financial status of the Granite School District has been a limiting factor in preventing more vigorous programs in vocational guidance, occupational instruction, and job placement for the young people of the district.

The net results of the above, regardless of the reason, has been the creation of large numbers of potential dropouts from school or actual dropouts whether they be classified as physical, wherein the person actually discontinues school, or as mental or educational, wherein the body may remain in school while the mental processes of the individual cease to function at a productive level.

A quick but erroneous inference might be drawn from this introduction, i.e., that the program of activities being proposed herein will do all things for all people. On the contrary, as will be seen when considering the objectives and the specific activities, a designated select portion of the present student enrollments in the schools of the Granite District comprise the population intended to be aided by this program.

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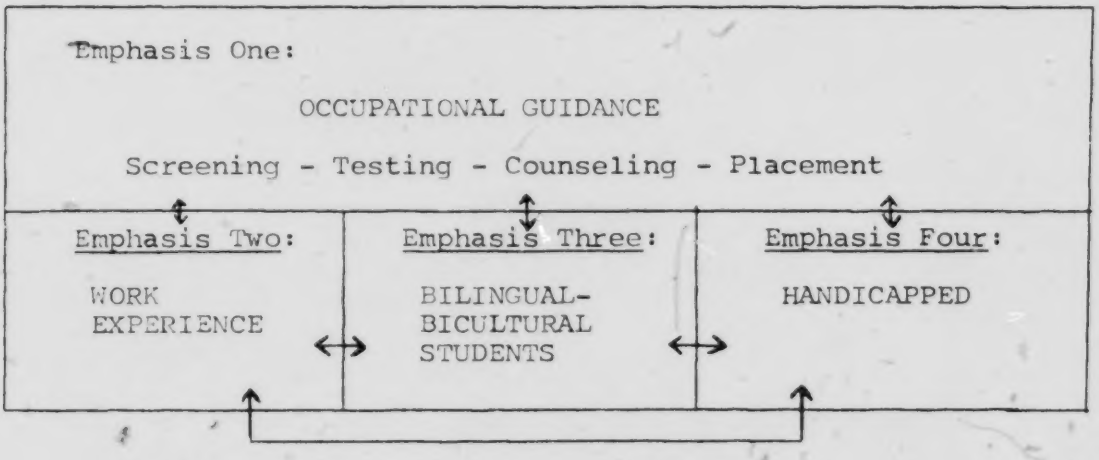
[1] Dropout Prevention Program, Title VIII ESEA of 1965. Draft: A Manual of Procedures for Preparation and Submission of Preliminary Proposals, p. 1.

[2] Source: Utah State Board of Education.

The program of activities being proposed herein is entitled the Diversified-Satellite Occupations Program. The program is multifaceted. At the same time, the components are interrelated. In the narrative these components are referred to as "Emphasis One," etc. The manner of interrelatedness is depicted in the following model.



Emphasis One: Occupational Guidance. One emphasis of the proposed program relates to building a closer working relationship between the school district and the State Department of Employment Security, while at the same time enhancing and broadening occupational aspirations and opportunities for youth through upgrading existing vocational guidance activities. Special emphasis is on programs designed to aid those students who might be categorized as being likely to be dropouts for any number of possible reasons.

Emphasis Two: Work Experience. Another emphasis relates to the actual combination of school and direct occupational endeavors during the time that the person is completing his schooling. Cooperative work-study-experience programs have been successful and much research indicates the potential for diffusion of such activities. In addition, Granite School District has engaged in "pilot" efforts in this regard and the results of these efforts support the claim for extending the program beyond its present limits.

Emphasis Three: Bilingual-Bicultural Students. For some students the problems associated with bilingual-bicultural situations in the home compound the total problem. Specifically, bilingual-bicultural problems arising from Spanish-Mexican-American homes constitute a third emphasis for the proposed program of activities.

Emphasis Four: Handicapped. A fourth emphasis relates to the present programs for handicapped students. Not enough is able to be done for these youth within the confines of the present resources.

At the present time more than 15 percent of the enrollment of the Granite School District falls into one or more categories of handicapping conditions. Five specific groups are identified: mentally, physically, and emotionally handicapped, learning disabilities and speech, hearing and visual impairments.

Only a portion of the students needing special instruction are being served at the present time. The learning disabilities area is composed of the largest number of students in need of occupational instruction. Knott cites the importance of vocational training in this area:

> The probability of difficulty in vocational selection, job finding and job holding, will be significant for a sizeable portion of minimal brain damaged children who reach adolescence or young adulthood with persistent problems in reading and arithmetic. Many of these children will constitute the "dropouts" from high schools. Their final adjustment to adult life will in large measure hinge upon their ability to earn a living.[3]

Vocational instruction for the "learning disabilities" group of children is almost nonexistant at this time. Even in the Granite School District, as mentioned under the pilot program referred to in emphasis two above, only a very small fraction of the youth of the District needing this kind of assistance are accommodated.

It is for those students that are handicapped and still not receiving appropriate vocational training for which this emphasis of the total Diversified-Satellite Occupations Program is designed.

It is thus being proposed that because of the interdependencies and interactions of constraining conditions that a multifaceted approach is in order. This will permit a more efficient use of available funds from all sources than would otherwise be possible if funding from limited sources were to be used exclusively for the respective different kinds of problems being considered.

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[3]Leslie W. Knott, Learning Disabilities, Introduction to Education and Medical Management. Charles C. Thomas, Publisher, Edited by Lester Tarnopol, Sc. D.

PROJECT OBJECTIVES

Original Goals and Objectives

The general objective of the Diversified-Satellite Occupations Program being proposed is that of enhancing the opportunities for purposeful employment of those youth in the high schools of the Granite School District who for any one of a number of reasons might be categorized as a potential dropout, an actual dropout, or a person in need of specialized vocational educational experiences through the inclusion of these youth in portions of a network of specially designed programs of activities. These youth are individuals and some programs of activities will be appropriate for some youths, other programs for other youths.

A secondary objective is that of establishing the Granite School District as an exemplary district for such exemplary programs.

The objectives are stated as they relate to each of the four emphases described in the previous section. Again, these ought not be considered as being separate and apart one from the other. Rather, they are interrelated and need to be thought of with this in mind as the analysis of the objectives is undertaken.

Emphasis One Objectives: The specific objectives to be achieved in the Diversified-Satellite Occupations Program as they relate to Occupational Guidance are as follows:

1. Identify those elementary and secondary students who are not being adequately served by the traditional school system and introduce alternative educational opportunities.

2. Effect an increase in the percent of students completing high school and a decrease in the number of students dropping out of school particularly for reasons of "academic failure," "dislike of school," or because of limited finances.

    a. Identify high school students who have dropped out of school, those who are potential dropouts because of poor attendance, failure in school or who are limited because of finances, or those handicapped students who are not presently being served in special classes.

    b. Test and counsel these students to ascertain their attitudes, interests and capabilities in relation to success in school placement in an entry level job.

3. Provide a continuous program of guidance related to student problems that will effect school and job efficiency.

4. Follow each student's progress on the job or in specific training programs for a period of two years.

5. Increase the counselor's knowledge and utilization of assessment techniques where vocational aptitudes and interests are concerned.

6. Establish a meaningful and dynamic communication channel between the schools and pupil employment agencies with reference to placing target students in meaningful employment.

Emphasis Two Objectives: The Work Experience objectives are:

1. Effect an increase in the number of job placements of non-college bound graduates into gainful employment.

2. Increase the opportunity for more students to participate in vocational work-study programs, related to their occupational choice, that leads to high school graduation.

3. Obtain training stations for a variety of occupational areas, including special education students not presently being served in special courses, in which students can be placed to obtain basic occupational skills in a cooperative work-experience program.

4. Provide instruction that relates general education-academic studies to work-experience.

Emphasis Three Objectives: The following objective statements are stated specifically with respect to problems which might arise from or with anyone having bilingual-bicultural difficulties. However, insofar as the Diversified-Satellite Occupations Program is concerned, these objectives need to be considered as adjuncts to the other objectives statements even though the specific objectives for the other emphases could be repeated here.

1. Teach each bilingual-bicultural student educational concepts in all phases of the curriculum in his native tongue while he is learning English.

2. Reinforce the relations between the school and the home through a common communication bond. Utilize

the Mexican-American community, professional and non-professional, in the implementation of bilingual-bicultural communication development. Encourage the professional staff to become involved in local community activities.

3. Provide appropriate in-service rather than pre-service training programs for teachers.

4. Utilize instructional materials which are relevant to the teaching-learning processes related to bilingual-bicultural youth and which will encourage the achievement potential of the bilingual-bicultural student.

5. Utilize bilingual aides from the local community where bilingual professional teachers are not available.

6. Recognize cultural-bicultural values and customs.

Emphasis Four Objectives: Here, too, the objectives for emphasis one and two could be repeated. They do not relate directly but with the addition of specific concerns for the handicapped. The objectives of emphasis four in this proposal are:

1. Establish a system of coordination to relate the Diversified-Satellite Occupations Program to current programs for youth with handicapping conditions.

2. Provide experiences to "bridge the gap" between regular and special education services so that all children have an appropriate vocational training program.

Refined Project Statement, May 1, 1972

DSOP/Career Development
Dropout Prevention

Rationale

The Granite School District's proposal and program are based on three factors:

1. Preventing dropout.[4]

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[4]Appendix A.

2. Providing career education information to dropouts or dropout-prone students.

3. Working for improvements in attitudes toward school and vocation; improvement in attitudes; lowering of anxieties.[5]

Locale

Redwood Elementary
Brockbank Jr. High
Central Jr. High
Kearns Jr. High
Western Area Vocational Center
3572 West 3500 South
Eastern Area Vocational Center
Central Area Vocational Center
3646 South Main
and
Redwood Experimental Facility

Introduction and Statement of Need: Students dropping out of school numbered 780 during the 1969-70 school year. This was an alarming number, since lack of interest in the curriculum offered seemed to be a major factor. Consequently, District Personnel explored all possible resources for the development of programs centered around career instruction and related experiences. Proposals were submitted requesting Federal and State funds. Fortunately, two grants were obtained, specifically, the Diversified Satellite Occupations Program, and the State Career Development Program. These projects have been in operation since the 1970-71 school year.

The results for the past two years have been significant as indicated in the following table:

Percent of High School Dropouts

1969-70	1970-71	1971-72
5.78	4.44	3.70 (Est. April 1)

This proposal seeks to continue both projects for the 1972-73 school year.

---

[5]Appendix B.

Statement of Objectives: We will adhere to our original proposal in reducing dropout through increased exposure to Career Education and growth in personal self-concept. Programs will operate at these levels:

Elementary--pilot group at Redwood School
Jr. High--Brockbank - Central - Kearns Jr.
Centers for Senior High students.

A. The following general objectives will be measured by tests described in Appendix B. (Testing: 1 through 4)

1. Improved attitudes toward school.
2. Lessening of anxiety.
3. Raising the achievement level.
4. More positive attitude toward vocational choices, and school in general.
5. Improved attendarce.
6. More closures; i.e. placement in job, re-enrollment in schools, combination of school/center and work.
7. We will continue to provide bilingual staff members to meet the indicated need and to maintain and increase the percentage of non-white students in our program.

Comparison of Enrollments
Percentage of Non-Whites 1970-71

Junior High	Granite District School	Granite District DSOP/CDP
Indian	.72	.91
Chicano	3.10	15.80
Oriental	.57	.70
Negro	.11	1.40
Other	.01	1.40

Senior High	Granite District School	Granite District DSOP/CDP
Indian	.50	.90
Chicano	2.49	2.72
Oriental	.49	.45
Negro	.06	-
Other	.03	1.30

B. Specific objectives for the 1972-73 school year encompass the recommendations made by the Federal and State Evaluation Teams.

Student self-concept will be a concern at all levels as indicated in general objectives. However, subject context will be centered on career guidance.

1. Curriculum will be strengthened with major emphasis on career guidance and occupational skills.

   a. Elementary Level:

      Career education curriculum units with stated objectives to be used by elementary teacher in pilot school (Redwood) with emphasis on field studies to support skill studies and with interchange of ideas, resources, materials with other teachers and grade level.

   b. Junior High:

      Emphasis will be placed on increased awareness of careers through subject matter, as well as direct observation of various occupations in the community.

   c. Senior High:

      1. Specific instructions in job skills

      2. Library of resources for pre-vocational and vocational information.

      3. Placement of students in work stations for training and "hands-on" experiences.

      4. Follow-up student evaluation with appropriate records for future job placement.

   The above objectives will be coordinated with District vocational education programs as well as Rehabilitation and the programs for the handicapped.

   All professional staff will be involved with the accomplishment of these objectives. Classified staff will be employed for building maintenance.

2. In-service Training.

   Teaching skills in career instruction will be enhanced through intensive in-service training which will be initiated at all levels. Curriculum

Specialists of the district will be assigned to work with all levels for greater integration of this program with total district activities. This will be done in cooperation with the project staff.

DESCRIPTION OF PROJECT DESIGN

Strategy and Plan of Action (Activities) to Accomplish Objectives

A. Curriculum

1. Elementary Level

a. General orientation to occupations by regular school staff--Redwood Elementary School.

b. Specific career education curriculum units used for instruction by DSOP teacher.

c. Employment of one fulltime elementary teacher who enjoys teaching on a one-to-one basis with disadvantaged, high risk dropout students. One who can teach in an open, meaningful way, with a great deal of caring for each individual.

d. Arrange the schedule for 1/2 day in the classroom and the other 1/2 of the day to be devoted to meaningful, researched field studies into the particular job they are studying at the time.

e. Select about 4 to 5 occupations to study. Determine those in which the parents of these students are or were employed.

f. Use the subject matter produced and obtain additional material which relates to the jobs. Teach the skills needed in the academic areas which are needed and meaningful to these jobs.

g. Refer to testing assessment appendix.

2. Junior High

a. Occupational guidance classes will be taught by DSOP Teachers.

b. Materials will be obtained from National Exemplary Projects and State and District Offices to be used in these classes.

c. Testing time will be reduced to allow for maximum time in career instruction.

d. Observation and study of jobs in the community will be done (age prohibits actual job training.)

3. Senior High

a. Instructional occupational classes will be conducted, emphasizing job skills and personal responsibilities, such as punctuality, etc.

b. National, State, District career materials will be obtained and utilized.

c. Each DSOP/Career Development student in secondary school is scheduled to "go through" COPE centers and enroll in classes within geographical school to meet career education interests, while still remaining in the program. This means that their interests and aptitudes will be assessed; the staff will pursue, with them, their particular vocational interests and opportunities through the use of career education materials, resources, and files. If available, enrollment in relevant classes will be made. Opportunities for "hands-on" and job placements for career education will be offered to the students.

d. DSOP/Career Development Program staffs will maintain year around contact with counselors in COPE centers in schools in order to integrate the programs.

e. We will work toward more cooperation between DSOP/Career Development staff and school counselors for job, class placement, and guidance.

f. Placement on a job in cooperation with State Rehabilitation Service.

B. In-service Training

In-service training will be a continual process based on observation of curriculum specialists, project staff, and evaluative instruments. The following specific activities have been set.

<u>May 31</u>

In-district conference on curriculum, remediation, recommendations, and strategies.

<u>June 1</u>

All DSOP/Career Development staff and District Counselors are scheduled to go through Career Orientation Planning Experience Centers at Olympus High School.

June 5-9

Three District Counselors and all staff members are attending the Career Education Workshop at Logan, Utah, under direction of the State Board of Education-Vocational/Career Education.

August 16-20

Lesson plans, resources, uses of "A Conceptual Approach to a Total Information System," the Technical Assistance Information Service (TAIS), for nine-week time span.

Subsequent quarterly reports will carry the results of these nine-week plans.

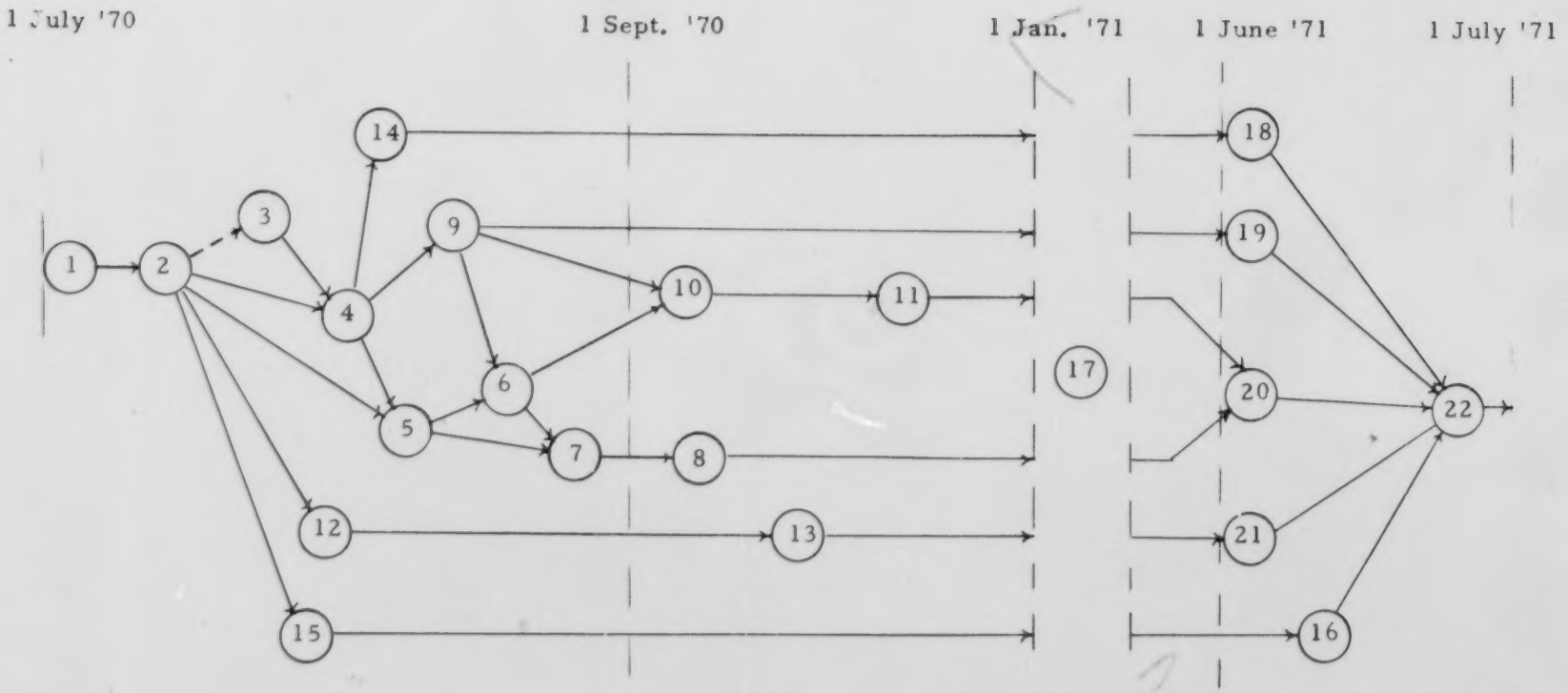
Pert Network (See page 19.)

Diversified-Satellite Occupations Program
PERT Network KEY

1. Grant awarded.
2. Director assumes responsibilities.
3. Center coordinators assume responsibilities.
4. Staff selection completed.
5. Student cumulative data reviewed.
6. Initial Diversified-Satellite Occupations Program work-experience students identified.
7. Work-experience stations identified.
8. Initial work-experience programs begun.
9. Direct occupational guidance functions begun.
10. Additional Diversified-Satellite Occupations Program work-experience students identified.
11. Additional work-experience programs begun.
12. Facilities utilization coordination begun.
13. Vocationally oriented academic programs begun.
14. Elementary and Junior High occupational guidance programs begun.
15. Diversified-Satellite Occupations Program evaluation begun.
16. Diversified-Satellite Occupations Program first year evaluation completed.
17. First biannual report submitted.

Diversified-Satellite Occupations Program PERT Network

(Milestone Events Only)



Key on next page.

18. First year Elementary and Junior High guidance programs completed.
19. First year direct occupational guidance functions completed.
20. First year work-experience programs completed.
21. First year vocationally oriented academic programs completed.
22. First year final report written.

Staff Utilization

Hilda B. Jones, Project Director[6]
Janice C. Romney, Project Administrator
Joan Neilson, Counselor-Junior High DSOP
P. E. Rusk, Psychologist

Elementary:
Curtis Smith, 6th Grade Pilot Project - Redwood

Junior High DSOP:
Margaret Copley, Kearns Junior
Carol Jaglinski, Brockbank Junior
David Nicol, Central Junior

DSOP/CDP Centers
EAVC
Tim Collins, Instruction/Management
Sheri Kramer, Instructor
Aide: Robert Stevens, 1/2 time Redwood Experiment

CAVC
Garry Stutz, Career Educ./Instruction/Job Placement
Julie Peterson, Instruction
Jane Fitch, Secretary

WAVC
Keith Gubler, Career Education, Management, Instruction
Leon Kessinger, Instruction
David Thompson, Career Education (2 hours weekly) and shop backup
Linda Poulson, Instruction - 4 hours daily
Barbara McAnulty, Secretary

Redwood Neighborhood Facility Experiment
Linda Poulsen, Instruction, 4 hours daily
Aide, David Marsh, 4 hours daily
Pat McGill, Social Worker, 2/5's time

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[6]Appendix E.

SCHOOL POPULATION STATISTICS

The statistical information on the school population is contained in the Evaluation of the Project, pp. 22- 88.

RESULTS AND ACCOMPLISHMENTS

See Evaluation of the Project, pp. 46 - 80.

EVALUATION OF THE PROJECT

Pages 22 - 88.

CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

See Evaluation of the Project, pp. 81 - 95 .

EVALUATION OF THE PROJECT

STATEMENT OF OBJECTIVES FOR THE THIRD YEAR

Walter R. Borg, Third Party Evaluator

Performance Objectives and Hypotheses

There are several statements of objectives that may be found in the various project reports and documents. Objectives stated in the first year generally deal with process rather than student performance. For example, the Interim Report for the first year of the project (June 30, 1971) states objectives such as: "Provide a continuous program of guidance related to student problems." Of the 18 objectives stated in this report, only two, dealing with dropout and job placement are concerned with student performance. Similarly, the Interim Report for the second year of the project lists 14 objectives with none stated in terms of learner performance and only two having performance implications.

The following performance objectives for the project are taken from the Revised Project Statement dated May 1, 1972. This is the first statement of performance objectives to be found in project documents and is directed towards the third year of the project. Most of these objectives are supported by hypotheses stated in the Proposed Psychometric Assessment Procedures dated May 5, 1972. To aid the reader, objectives and related hypotheses have been stated together. [1]

A. Objectives related to student attitudes

1. Improved attitudes toward school.

2. More positive attitude toward vocational choices, and school in general.

3. Improved attendance.

HYPOTHESIS: Resulting from the application of modified and corrective approaches in emotional-social-scholastic configuration of CDP/DSOP programs, it may be expected that scores obtained from the administration of the Purdue Master Attitude Scales, "A Scale for Measuring Attitude Toward Any Institution" and "A Scale for Measuring Attitudes Toward Any Vocation" that there will be indicated more favorable attitudes toward all variables relative to the two scales than was initially obtained in testing at the beginning of the treatment plan (in operational terms, scores above 6.0 which are considered unfavorable . . . the indifference point on all scales is 6.0).

HYPOTHESIS: Subsequent to the application of modified and corrective curriculum and treatment program for CDP/DSOP, it may be expected that students will obtain statistically significant decreases in all five Demos D Scale subscale scores, including the DDS "Total" score.

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[1] Objectives and hypotheses taken from Philip E. Rusk study. See footnote #1, page 25 of this report.

HYPOTHESIS: Although no hypothesis was stated for the attendance objective, it would appear that the project staff would hypothesize significantly better attendance at the DSOP Centers than that found for the same students in regular school prior to admission to a DSOP Center.

B. Objectives Related to Student Achievement

1. Raising the achievement level.

HYPOTHESIS: As a result of modified and corrective approaches in reading, spelling, and arithmetic-numerical computation skills, it may be expected that CDP/DSOP student will obtain a statistically significant increase and improvement in grade level scores on The Wide Range Achievement Test after application of the aforementioned curriculum and treatment program.

HYPOTHESIS: As a result of modified and general curricular approaches, it may be expected that CDP/DSOP students will obtain a statistically significant increase and improvement in the Fundamental Achievement Series "Numerical," and Fundamental Achievement Series "Verbal," ability scores. Such increases will reflect a lessening of variables that interfere with optimal behavior level functioning and academic proficiency.

C. Objectives Related to Anxiety

1. Lessening of anxiety.

HYPOTHESIS: As a result of modified and corrective approaches in emotional-social and academic areas, thereby promoting a progressive personality development rather than fixative or regressive, it may be expected that CDP/DSOP students will obtain lower sten scores on all subscales of the IPAT Anxiety Scale as well as a lower general anxiety sten score, subsequent to the application of the aforementioned curriculum and treatment program.

HYPOTHESIS: Resulting from the modified and corrective approaches used in the elementary DSOP program, including educational, social and emotional variables, it may be expected that elementary DSOP students will obtain a statistically significant decrease in general anxiety as indicated by a weighted pool of six scores (excitability, ergic tension, guilt proneness, poor self sentiment control, ego weakness, and threctia) with an average score of 30, and a score of 40 indicating high anxiety, and a score of 10 indicating low anxiety.

D. Miscellaneous Objectives. No hypotheses were stated for these objectives.

1. More closures; i.e., placement in job, re-enrollment in schools, combination of school/center and work.

2. We will continue to provide bilingual staff members to meet the indicated need and to maintain and increase the percentage of nonwhite students in our program.

E. Hypotheses related to personality changes in the elementary school sample. Although the project stated no objective related to changing the personality characteristics of elementary school children (except for anxiety), a personality measure was administered and personality changes were hypothesized for 13 of the 14 variables measured. The hypothesis as given in the DSOP Tests and Measurements booklet dated August 14, 1972 is as follows:

HYPOTHESIS: As a result of modified and corrective approaches in emotional, social and academic areas, thereby promoting a progressive personality development rather than fixative or regressive, it may be expected that DSOP/CDP students at the elementary grade level, subsequent to the application of the aforementioned curriculum and treatment program will, upon taking the IPAT Children's Personality Questionnaire (second administration):

1. Obtain a statistically significant higher sten score on Factor "A" than initially.

2. Obtain a sten score on Factor "B" that is not statistically significant from the initial sten score obtained by a given student.

3. Obtain a statistically significant higher sten score on Factor "C" than initially.

4. Obtain a statistically significant lower sten score on Factor "D" than initially.

5. Obtain a statistically significant lower sten score on Factor "E" than initially.

6. Obtain a statistically significant higher sten score on Factor "F" than initially.

7. Obtain a statistically significant higher sten score on Factor "G" than initially.

8. Obtain a statistically significant higher sten score on Factor "H" than initially.

9. Obtain a statistically significant lower sten score on Factor "I" than initially.

10. Obtain a statistically significant lower sten score on Factor "J" than initially.

11. Obtain a statistically significant higher sten score on Factor "N" than initially.

12. Obtain a statistically significant lower sten score on Factor "O" than initially.

13. Obtain a statistically significant higher sten score on Factor Q_3 than initially.

14. Obtain a statistically significant lower sten score on Factor Q_4 than initially.[1]

Process Objectives

One process objective for the third year is stated in the Interim Report dated June 30, 1972:

1. Strengthen curriculum with major emphasis on career guidance and occupational skills.

Other Recommended Areas of Evaluation

In a memo to the project staff dated July 25, 1972, Mr. Sidney C. High Jr., Chief, Program Development and Operations Branch USOE, identified the following process and product variables that he recommended be considered in the evaluation. These variables were specifically included in the third party evaluator's Evaluation Plan.

1. Administration of the project.

2. Career Education Program.

3. Quality of materials produced.

4. Impact of the project on the school system.

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[1]Objectives and hypotheses (pp. 22-25 this report) are taken from Philip E. Rusk, Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupations Program in the Granite School District: Paradigm for the 1972-1973 Academic Year, sponsored by Reed M. Merrill, Ph.D., Professor, Department of Education, University of Utah (Salt Lake City: Granite School District Press, Aug. 14, 1972), pp. 38-43.

SELECTION AND DESCRIPTION OF PARTICIPANTS

Introduction

The subjects in this project were not randomly selected nor randomly assigned to the Centers. The nature of the project precludes random selection of students from any meaningful population since students to be selected are drawn from a single school district and selection is limited to students having certain characteristics. If the number of students qualified for admission to the DSOP Centers had exceeded the number who could be accepted, it would have been desirable to set up the project using a pre-post experimental design with control group. Under these conditions, students seeking admission to the program and meeting the qualifications would have been randomly assigned either to a Center (treatment group) or a nontreatment control condition. If this design had been used, however, when the Centers had sufficient facilities to meet the needs of the total sample, an ethical question would have been raised. Namely, is it ethical to deny the Center facilities to students who appear to need these facilities in order to collect more rigorous evaluation data? A practical problem would have also arisen with the high school sample since the high school students were virtually all dropouts and it would have been extremely difficult to obtain pre-post test data on the control group. This problem would not have been serious with the junior high school sample since students not selected for admission to the Junior High School Centers would have remained for the most part in a regular school situation. This would have provided a good control group and would have merely resulted in some students receiving center treatment while the control students would have remained in regular classes.

High School Selection

Selection procedures for high school students are listed in two of the project documents: For the 70-71 year, these are given in the booklet entitled DSOP Tests and Measurements dated August 14, 1972 and the booklet entitled Interim Report dated June 30, 1971. The two selection procedures described are essentially the same. I have given below the procedure listed in the Interim Report since this report was contemporary with the first year of the project, and therefore, more likely to be accurate:

> "Student population. The selection of students to be enrolled in the senior high school program was based on one or more of the following:
>
> 1. He (or she) was considered by the counselors or psychometrists to be an emotionally disadvantaged person.
>
> 2. He was a school dropout and did not attend school for at least three months prior to enrollment in DSOP.

3. He was referred by the Juvenile Court Judge, who felt that the program was appropriate to the particular needs of the individual.

4. He requested to participate.

5. Parental approval was required.

6. High rate of absenteeism."

High school selection procedures for 71-72 year are given in the Interim Report dated June 15, 1972. These procedures are essentailly the same, but the reader will note that Item 6 from the first year has been omitted.

"Students were selected for the senior high school component on the basis of one or more of the following criteria:

1. The candidate was considered by counselors and/or school psychologists to be an emotionally disadvantaged person.

2. The candidate was a school dropout and did not attend school for at least three months (while school was in session) prior to enrollment in DSOP.

3. The candidate was referred by the Juvenile Court Judge, who felt the program was the most appropriate placement to meet the particular needs of the individual.

4. The candidate requested participation.

5. Parents approved of student's participation in the program."

None of the program documents described the procedures used for selection for the 1972-73 year. Reports from the project staff indicate that these procedures were essentially the same as applied in the previous two years.

Junior High School Selection

The following selection procedures were used for selecting junior high school students during the 70-71 year.

"Student population. The following criteria was used in the selection of students for the junior high school program.

1. He (or she) was considered by the counselors or psychometrists to be an emotionally disadvantaged person.

2. His past records showed a high rate of absenteeism.

3. He was referred by a juvenile court judge and/or was on active probation.

4. He was referred to the program by school staff due to classroom difficulties.

5. He himself expressed interest in the program."

For the 71-72 year, the procedures changed slightly as may be seen below:

"Students were selected for the junior high school component on the basis of one or more of the following criteria:

1. The candidate was considered by counselors and/or school psychologists to be an emotionally disadvantaged person.

2. The candidate was a school dropout and did not attend school for at least three months (while school was in session) prior to enrollment in DSOP.

3. The candidate's past attendance record was an indicator of a negative attitude toward school.

4. The candidate exhibited one or more characteristics of a potential dropout.

5. The candidate desired to participate.

6. Parental approval was required for participation."

The project staff reports that selection for the 72-73 year was essentially the same as for the 71-72 year.

Elementary School Selection

The procedures for selecting elementary school pupils are somewhat less clear. For the first year of the project, the following procedures are described in the Interim Report for June 30, 1971:

> Grade point averages, attendance records, test results, and family case records were utilized in determining potential dropouts. Following such identification, the school social workers in the elementary area held case conferences with the junior high counselors regarding the subsequent placement of sixth grade pupils in the junior high schools. This program did not commence until late in the school year.

For the 71-72 year, the procedures for the elementary school sample are even less specific. The only reference made to selection in the project documents is found in the Interim Report, June 15, 1972. This report states, "The elementary school program was an orientation and screening process in which all students in the sixth grade in the

target schools participated."

The selection procedures for the 72-73 year were checked with the project staff. The staff reported that the procedures for the 72-73 year were virtually identical with those employed in the first two years of the study.

Samples Analysed

All cases having pre-post scores on a given variable were included in the analysis of that variable. Since students often took only part of the pre-post battery, this approach yields data on different numbers of cases for each variable. Although this analysis procedure is much more difficult than limiting the analysis to complete cases, it has the advantage of maximizing the amount of data available for analysis. The numbers of cases employed in each analysis are given in Table 1. The elementary sample contained only nine cases. One student had taken none of the post tests. Analysis was based on the other eight cases, all of which were complete.

Description of the Subjects

Of the 258 students who attended the DSOP centers during the 1972-73 year, 68 percent were boys and 32 percent girls. Boys made up 70 percent of the high school sample, 58 percent of the junior high school sample, and 100 percent of the elementary sample. See Table 2 for sex distribution by center.

Grade level distribution by center is given in Table 3. It may be seen that the great majority of students are in grades 9-12.

TABLE 1

Number of Subjects Employed in Each Phase of the Secondary Analysis

Variable	Center					
	Eastern	Western	Central	Kearns JHS	Central JHS	Brockbank JHS
1. Wide Range Achievement						
a) Reading	59	44	28	14	14	10
b) Spelling						
c) Arithmetic	37	24	26	12	14	11
2. Demos D Scale (all scores)	45	23	28	13	15	5
3. Purdue Institutional Attitude						
a) DSOP	40	16	25	14	14	11
b) Regular School	40	16	25	14	14	11
4. IPAT Anxiety (all factors)	45	23	26	12	13	11
5. Fundamental Achievement Series (all scores)	34	19	24	12	13	11

TABLE 2

Sex Distribution of Students
in the DSOP Centers, 1972-73

	Eastern Center	Western Center	Central Center	Kearns JHS	Central JHS	Brockbank JHS	Redwood Ele	Totals
Male	44	52	33	12	17	9	8	175
Female	23	18	14	9	10	9	0	83

TABLE 3

Grade Distribution of Students
in the DSOP Centers, 1972-73

Center	6	7	8	9	10	11	12
Eastern Center				1	13	26	27
Western Center				2	19	30	16
Central Center					5	18	24
Kearns Jr.H.S.				21			
Central Jr.H.S.			2	25			
Brockbank Jr.H.S.			18				
Redwood Ele.	8						
Totals	8	0	20	49	37	74	67

MEASURING CHANGES

Introduction

The following information on measures employed to estimate change in the dependent variables is based upon the report by Philip E. Rusk, dated August 14, 1972, pages 38-60.[1] This information has been edited in order to meet the needs of the final report. Measures were selected and pretesting conducted before the third party evaluator was employed so the evaluator did not have an opportunity to make recommendations regarding instrument selection.

After an examination of the various descriptions of traits and configurations of the dropout personality, the following types of psychometric procedures appear appropriate for use in the evaluation of the DSOP/CDP:

1. A test to determine the present level of scholastic achievement of students.

2. An instrument to determine levels of anxiety operant in the behavior of students.

3. A scale to identify and measure attitudes which may be the precursors of behavior indicative of dropping from school.

4. An instrument to determine students' attitudes toward the treatment program being used in the DSOP/CDP.

5. A scale to measure students' attitudes toward specific vocations/occupations.

6. A test to assess the knowledge and competencies that a job applicant may reasonable be expected to have acquired in the course of ordinary daily living; such an instrument, in the broadest sense, should evaluate intellectual and cultural knowledge competencies.

7. An instrument to ascertain the etiology of anxiety operant in the behavior of the student.

These configurations were considered in the selection of certain tests and instruments for use in determining the efficacy of the treatments i.e., the DSOP/CDP programs.

Measures Employed

With these factors in mind, the following instruments were selected by the project staff as assessment procedures in the evaluation of the Granite School District's Diversified Satellite Occupations and Career Development programs:

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[1]The following information on measuring changes (pp. 32-43, this report) were taken from Philip E. Rusk study, op. cit. Footnotes are as given by Rusk.

Secondary Evaluation:

1. The Wide Range Achievement Test
2. The Demos D Scale
3. The Purdue Master Attitudes Scales
4. The IPAT Anxiety Scale
5. The Fundamental Achievement Series

Elementary Evaluation.

1. The Wide Range Achievement Test
2. The IPAT Children's Personality Questionnaire

Descriptions of the Measures - Secondary

A. Academic Achievement

The Wide Range Achievement Test, 1965 Edition, is an individually administered evaluation primarily for use in indicating level of skill development in oral reading, spelling, and arithmetic computation. The testing range is individually adjusted to the achievement level (kindergarten through college). The WRAT has been extremely useful in remedial and vocational studies of children and adults.

Time Required for Administration: 20 to 40 minutes (some of the WRAT subtests are timed)

Time Required for Scoring: 20 to 30 minutes (approximate)

B. Attitudes of Students Toward Educationally Oriented Areas of Behavior . . . The Identification of the Potential Dropout

The Demos D Scale attempts to identify and measure attitudes which may be the precursors of behavior indicative of dropping from school. Responses made by students on this attitude scale would appear to be very revealing of attitudes, feelings, behavior, values, and standards. This scale provides an objective method for obtaining expressions of attitudes related to dropping out of school . . . "the DDS is of special help in working with junior and senior high school students."[1] Furthermore, this scale attempts to identify those students with strongly negative attitudes toward teachers and school, so preventive or corrective

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[1] Demos, George D., The Demos D (Dropout) Scale: Manual (Los Angeles: Western Psychological Services, 1965), p. 1.

work can take place while students still are in school . . . and, "it can provide data about students to facilitate the counseling or psychotherapy of problem pupils. In addition, this instrument helps in the establishment of structure and special school programs for identifying and working with potential dropouts so schools can be of help in reducing dropouts.'[1] According to the authors of this instrument "the primary purpose of the DDS is to determine verbalized opinions which reflect attitudes presumably related to dropping out of school. When such opinions are obtained, the DDS has accomplished its purpose, and can be said to possess validity. In all experimental and clinical situations tested, the DDS elicited such expressions."[2]

There are five DDS scores which provide data to be compared with the standardization groups used so that similarities of tested students' DDS scores can be compared with those of both the non-dropout and the dropout groups.

The five Demos D scores obtained are:

1. DDS Total Score: This score is the most important of the datum. On the basis of clinical experiences with the DDS, tabular data presented in the DDS Manual enables the examiner to interpret scores in terms of probabilities . . . chances of scores identifying potential dropouts; scores range from 29 to 145.

2. Basic "T" Area Score: Deals with attitudes toward teachers, counselors, administrators.

3. Basic "E" Area Score: Deals with attitudes toward education, training, college.

4. Basic "P" Area Score: Deals with attitudes toward peers and parents.

5. Basic "S" Area Score: Deals with attitudes toward school behavior.

Time Required for Administration: 15 to 20 minutes

Time Required for Scoring: 10 to 20 minutes

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[1] Ibid.

[2] Ibid.

C. Attitudes of Students Toward Specific/Specialized Programs and Vocations

The Purdue Master Attitudes Scales: "A Scale For Measuring Attitude Toward Any Institution", was used in an attempt to determine students' attitudes toward the Diversified Satellite Occupations and Career Development Programs as a specialized treatment program.

The Purdue Master Attitudes Scales: "A Scale For Measuring Attitudes Toward Any Occupation", was used in an attempt to determine DSOP/CDP students' attitudes toward specific vocations.

The purpose of The Purdue Master Attitudes Scales is to give standardized measures of attitudes toward attitude objects as indicated in the titles of the various scales. For example, the "Scale To Measure Attitude Toward Any Occupation" enables measuring the attitudes toward any and all vocations. Each of these scales is available in two equivalent forms, "A" and "B".

Time Required for Administration: per scale 5 to 10 minutes

Time Required for Scoring: per scale 5 to 10 minutes

D. Personality Assessment: Evaluation of Anxiety and its Etiology

The IPAT Anxiety Scale, "Self-Analysis" Form, assesses anxiety through a self-report, multiple-choice procedure; here the assessment of anxiety level is purported by the authors of the measure to be accessable to psychometric evaluation as distinct from general neurosis or psychosis. This test was planned for use as a brief verbal, clinical questionnaire clerically scorable. "The total score is susceptible for analysis to give indications of the origins of anxiety . . . thus, it is valuable in both diagnosis and prognosis where it can be re-administered to plot changes during the course of therapy or treatment."[1] The single anxiety score can be analyzed along two parameters: overt-manifest and covert-indirect anxiety. There is also a breakdown of the total anxiety score into components or etiological variables of anxiety; these are listed below:

1. Total Anxiety:

"That amount of overall, free-floating anxiety, whether it be situationally determined or relatively

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[1]Cattell, R. B. and Scheier, I.H., The IPAT Anxiety Scale Questionnaire: Handbook (Champaign, Illinios: Institute for Personality and Ability Testing, 1963), p. 13.

independent of the immediate situation . . ."[1] The scale does not purport to be primarily a measure of any of the other varieties of anxiety discussed clinically, e.g., "bound," "characterological." Further, the authors of the IPAT Anxiety Scale state that "inadequate, immature personality types" and "psychopaths" obtain an average anxiety level sten score of 7.0 or more.[2]

2. Overt/Covert Anxiety Ratio:

"This (test) is intended to indicate the degree to which the (subject) is or is not conscious of his anxiety, perhaps also of his wish consciously to emphasize it."[3] There are 20 test items that are relatively indirect and hidden in purpose; further, there are 20 items whose purpose is symptomatic or conscious . . . these items serve as a record of actual symptoms, as an indication of how conscious the individual is of his problem, and also act as "clues" to attempts to distort and over-emphasize symptoms. "Typically, these part scores are organized in terms of a ratio of overt to covert."[4] Rawn has found that ". . . those least prone to verbal indications of physical hostility show most covert anxiety. Similarly, those most given to physical hostile expressions have greater overt anxiety."[5] Bendig found that "covert anxiety has a lower correlation than overt anxiety with the tendency to make socially-desirable responses."

3. Anxiety Generated by Lack of Self-Sentiment Development"[6] $Q_3(-)$

"At the healthy, non-anxious (low score) pole, the component represents the individual's motivation to integrate his behavior about an approved, conscious

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[1] Ibid.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Rawn, M. L., "The Overt-Covert Anxiety Index and Hostility, Journal of Clinical Psychology, 14: pp. 279-280, 1958.

[6] Bendig, A. W. and Hountras, P.T., "Anxiety, Authoritarianism, and Student Attitude Toward Departmental Control of College Instruction", Journal of Educational Psychology, 50: pp. 1-7, 1959.

self-sentiment, and socially-approved standards. Failure to integrate behavior about a clear self-concept (high score on the scale) is one of the major causes and symptoms of anxiety. The $Q_3(-)$ component score may thus be considered a measure also of the extent to which anxiety has become bound in socially-approved character structures and habits, with more binding indicated by a lower Q3(-) and free anxiety score." [1]

4. Anxiety Generated by Lack of Ego Strength and Complicating Defenses: C(-)

"At its low score, non-anxious pole, this component represents the well-known concept of ego-strength . . . the capacity to control and express frustrative tensions in a suitably realistic way. The relation of ego weakness (high score on C(-)) to anxiety could mean that an insecure ego, with many ego defenses, etc., generates anxiety. An alternative hypothesis is that a high anxiety tension has caused some regression and prevented normal growth of ego strength." [2]

5. Anxiety Generated by Suspiciousness, Protensive-Type Insecurity: L

"The social difficulties caused by paranoid-type behavior could lead to isolation and anxiety, or anxiety might sometimes occur first and the paranoid behavior develop as a defense against it." [3] Through protension the individual is able to manipulate himself into various difficult and trying social situations and then, through projection, place the blame for the ensuing melange of discomfort on to others.

6. Anxiety Generated by Guilt Proneness and Abasement Presses: O

"Descriptively, this component involves feelings of unworthiness, depression, and guilt.

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[1] Cattel and Scheier, op.cit., p. 16

[2] Ibid.

[3] Ibid.

In Freudian terms, it suggests the concept of anxiety as generated by superego pressures, and in its extreme form, the pattern clinically resembles depressive reactions and other types of neurosis."[1]

7. Anxiety Generated by Ergic Tension, Id Pressure: Q_4

"Actual correlations and factor analysis show this to be one of the largest and most central components in anxiety. It appears to represent the degree to which anxiety is generated by id pressure (by excited drives and unsatisfied needs of all kinds)."[2] Situational fear, need for recognition, and sex drive excitation are among the drives found positively related to this component. It shows itself descriptively in proneness to emotionality, tension, irritability, and jitteriness.

Time Required for Administration: 20 to 30 minutes (approximately)

Time Required for Scoring: no specific time . . . protocol is individually administered and scored.

E. Intellectual and Cultural Knowledge Competencies

A unique approach in psychometric assessment of intellectual functioning is The Fundamental Achievement Series. These two new tests, FAS "Verbal" and FAS "Numerical", cover the ability range from basic literacy to somewhat above the eighth grade level. The content taps the knowledge and competencies that a job applicant may reasonably be expected to have acquired in the course of ordinary daily living and that will be relevant for actual job performance. Questions are based on experiences assumed to be familiar to both the disadvantaged and the advantaged. Two forms: "A" and "B" are now published. Questions in the FAS "Verbal" and FAS "Numerical" tests are based on everyday experiences that simulate real life situations and demands. The FAS "seeks fairness by using questions that are culture-relevant rather than culture-free."[3] These tests are administered orally by means

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[1] Ibid.

[2] Ibid.

[3] Bennett, George K. and Doppelt, Jerome E., Fundamental Achievement Series: Manual (New York: The Psychological Corporation, 1948), pp. 3-4.

of tape-recording to enable those with limited reading skills to demonstrate their true abilities. Furthermore, the tape recordings ensure accurate timing and identical presentation to all who take the tests . . . "the possibility of examiner bias is eliminated."[1] "To minimize the feelings of frustration likely to occur when an applicant or student can answer only one or two questions correctly, many easy questions were deliberately included in both the Verbal and Numerical tests. These easy questions permit even poorly informed candidates to demonstrate the extent of their capabilities."[2] Percentile norms for both white and black students in northern and southern schools, applicants and employees in a southern plant, are available. The FAS "Verbal" test includes items which measure the ability to read signs and restaurant menus, to find names on an apartment house list and numbers in a telephone book, to recognize the correct spelling and meaning of commonly used words, and to understand orally presented information. The ability to write legibly is tested in three items which call for the copying of simple sentences. The FAS "Numerical" test includes items which measure the ability to tell time and recognize numbers, to understand calendars, and to solve problems that range from simple arithmetic to the computation of interest.

Time Required for Administration: 30 minutes.

Time Required for Scoring: variable

Description of the Measures - Elementary

The addition of an elementary unit of the Granite School District to the general program of the DSOP/CDP requires supplemental testing and evaluation procedures in addition to the present repertoire of instruments. Except for The Wide Range Achievement Test, all other previously mentioned tests and instruments have been standardized for use only from grades seven and above; furthermore, the reading difficulty levels (determined through applications of various reading difficulty level formulae . . . e.g., Stelfre Index, Flesch Formula), preclude the use of any of these instruments at the elementary school level.

With these factors in consideration, the following assessment procedures were used at the elementary grade level:

A. Academic Achievement

The Wide Range Achievement Test, 1965 Edition, was employed. A description of this measure is given in the preceeding section on the secondary test battery.

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[1] Ibid.

[2] Ibid.

B. Personality Evaluation: Multi-factor Personality Self-Report Inventory

The IPAT Children's Personality Questionnaire, CPQ, yields a general assessment of personality development by measuring fourteen distinct dimensions of personality which have been found "by psychologists to approach the total personality . . . By working with these fourteen scores individually and in combination, the psychologist can obtain predictions of school achievement, especially underachievement, the tendency toward delinquency, the likelihood of leadership potential, the possible need for clinical help, and avoiding excessive emotional disturbance, etc."[1] The CPQ is a standardized test with four forms, "A", "B", "C", "D"; each form divided into two parts. Each part can be given in a class period, to a single individual or to groups. The test is designed for children between eight and twelve years of age, with reading vocabulary controlled, and with appropraite norms given according to both age and sex. The CPQ is administered without a time limit, but for younger children, two sessions should be used for Form "A" with part "A-1" given at one time and part "A-2" given at another time. Each of the fourteen dimensions of personality measured by the CPQ has a technical name, a common name (or several names), and an alphabetic symbol for convenient reference, e.g., "B", "F", "G", and so forth.[2] The following descriptions summarize much of the interpretation currently applied to the various scales.

Factor "A": The high scorer is "generally characterized as warm and sociable, the low scorer, as more cool and aloof. At the childhood level, the difference between the high and low scorers is particularly evident in the extent to which the child responds favorably to teachers and to the school situation." [3]

Factor "B": The child who scores high on this factor "tends to be bright and abstract-thinking, while a low-scoring child

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[1] Porter, Rutherford B., Cattell, Raymond B., and Ford, John J., The Children's Personality Questionnaire: Manual (Champaign, Illinois: The Institute for Personality and Ability Testing, 1968), pp. 2-3.

[2] Cattell, et. al., employs a "Universal Index" system in which these traits derived through factor analysis are designated by an alphabetical code/symbol, and in some cases, a number. Besides the trait descriptions listed on the "Profile" sheet, each factor is further delineated and operationally defined in the Manual for the CPQ.

[3] Ibid.

is more concrete-thinking. This intelligence factor is simply a rapid screening measure which allows the classroom teacher to assess general ability especially as the child is functioning. It is not intended to replace the more valid estimate of IQ obtained from longer measures."[1]

Factor "C": "The high scorer appears relatively calm, stable, socially mature, and has higher ego strenth for his age, and is better prepared to cope effectively with others than is the low scorer, who is relatively lacking in frustration tolerance and more subject to a loss of emotional control" through a lower ego strength.[2]

Factor "D": The child who scores high on this factor "seems to have a tendency to exhibit distress on slight provocation or to overreact to various kinds of stimuli. The low scorer might be described as emotionally placid," phlegmatic, deliberate.[3]

Factor "E": The high-scoring child is "relatively active, assertive, and aggressive, while the low scorer is more docile, mild, and submissive. At the childhood level, agressive behavior is a more likely expression of this factor than is successful dominance, since most of the techniques of social manipulation are yet to be learned. A high E score is frequently accompanied by behavior problems at this age level, but if the underlying assertiveness is handled in a way conducive to the development of more constructive expression, the later adjustment of the child may be quite successful."[4]

Factor "F": "The high scorer is rather enthusiastic, optimistic, and self-confident. The low scorer is serious and self-deprecating. Research evidence indicates that the high F child is likely to come from a relatively secure and affectionate family milieu, while the low-scoring child's home life is likely to be characterized by depreviation of affection."[5]

Factor "G": "This scale apparently reflects the extent to which the child has incorporated the values of the adult world."[6] Low scorers tend to be expedient, undependable,

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[1] Ibid.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Ibid.

[6] Ibid.

bypasses obligation (so-called weak superego strength); high scorers tend to be conscientious, perservering, staid (so-called strong superego strength). Of special importance at this childhood level are the values relating to achievement in the school setting."

Factor "H": "Like Factor A, Factor H constitutes a component of extraversion-introversion and is expressed in varying degrees of sociability. While the high A individual is sociable in the sense that he shows a positive emotional response to people, the high H individual is sociable in the sense that he interacts freely and boldly with people. The low H child is more sensitive and more easily intimidated and seeks to avoid social threat and overstimulation through withdrawal."[1]

Factor "I": Research evidence points to the personality patterns associated with the high end of this factor as a kind of sensitivity fostered by overprotection. "Accordingly, the high-scoring child is one who tends to show greater dependence fearful avoidance of physical threat, and more sympathy for the needs of others than the low scorer, who is more independent, self-reliant, robust, and practical."[2]

Factor "J": The high scorer tends to be individualistic, circumspect, guarded, critical of others, and obstructive, while the low scorer is more freely expressive, active, and uncritical.[3]

Factor "N": "In older groups, the high N individual has been described as socially perceptive and skillful, sharp, and rather opportunistic, while the low N individual is described as more naive, sentimental, and youthfully awkward. The specific expression of this factor in childhood seems less clearly defined. The high scorer, however, does seem more 'wise' to the ways of adults and peers and, therefore, better able to advance his own interests than the low scorer."[4]

Factor "O": According to the authors, "this is the factor most directly concerned with pervasive subjective distress, and it has been found in older groups to be the factor which best differentiates neurotics from the general population. The distress reaction of the high scorer might be variously characterized as irritability, anxiety, or depression, depending on the situation."[5]

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[1] Ibid.

[2] Ibid.

[3] Ibid.

[4] Ibid.

[5] Ibid.

Factor "Q_3": "With older groups, this factor tends to reveal those who have strong control of their emotions and general behavior, and who are especailly socially aware and careful. The low Q_3 indicates one who is not bothered by will control nor the regard for social demands. A child with a low Q_3 score might, for example, be more frequently in trouble with school regulations, not with the delinquent intent but through carelessness and neglict."[1]

Factor "Q_4": "In older groups, Factor Q_4 seems to relate to a variety of symptomatic behaviors that might generally be explained in terms of 'nervious tension' or undischarged drive. The high Q_4 child feels frustrated and may give way to displays of temper and irritability. The low, relaxed end of the scale seems to reflect a kind of composure that makes for easy sociability."[2]

Time Required for Administration: 40 to 50 minutes (untimed)

Time Required for Scoring: variable.[3]

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[1] Ibid.

[2] Ibid.

[3] Rusk, op. cit., pp. 43-60. Pages 32-43 of this report are taken from Rusk report (including footnotes).

Administration

Pre and post treatment measures were administered by the project psychologist and two assistants. Students entered the centers throughout the school year, and were administered the pretest battery upon entry. The distribution of pretest dates is given in Table 4.. All students were administered the post-treatment battery in April and May. Students who left the program before the post tests were administered were not included in the analysis.

TABLE 4

Distribution of Pre-test Dates

Month	Center: Central Center	Western Center	Eastern Center	Brockbank JHS	Central JHS	Kearns JHS	Redwood Ele.
September '72	22	11	23	5	12	9	9
October	15	20	15	6	6	0	0
November	0	11	7	0	5	5	0
December	2	7	2	0	1	1	0
January '73	3	12	15	7	1	0	0
February	2	4	4	0	0	6	0
March	2	3	0	0	1	0	0

Matching Measures to Performance Objectives

The project staff was generally successful in selecting measures that matched the project's performance objectives. Table 5 summarizes this match.

TABLE 5

Measures Employed to Evaluate Performance Objectives

Objectives	Measures
1. Improved attitudes toward school.	1. The Demos D Scale
2. More positive attitude towards vocational choices.	2. The Purdue Master Attitudes Scale: for measuring attitude toward any Occupation
3. More positive attitude towards school in general.	3. The Purdue Master Attitude Scale: for measuring attitude toward any Institution
4. Raising the achievement level.	4. (a) The Wide Range Achievement Test (b) The Fundamental Achievement Series
5. Improved attendance	5. Student attendance records from the center versus attendance of same students in regular school the previous year.
6. Lessening anxiety	6. The IPAT Anxiety "Self-Analysis" Scale
7. Increased job placement, re-enrollment in schools	7. Data available on status of '72-73 students but no comparative data to test for an increase.
8. Increase the percentage of non-white in DSOP program.	8. Data from district records

RESULTS

Analysis of Secondary Data

The tests that were employed by the investigators to measure the achievement of the performance objectives were analyzed by the third party evaluator using several analysis procedures. The most extensive analysis employed two classification analysis of variance of gains scores. The two classifications were "Centers" and "Learner Attendance." This analysis permitted us to identify significant differences in gains on the dependent variables between centers and also to identify significant differences in the gains made by students in the centers who were in the top half of their group in percentage of attendance as opposed to those in the bottom half of the group in percentage of attendance. The original evaluation plan called for dichotomizing students on the basis of whether they were attending the center full time or half time. It was not possible to use this dichotomy, since virtually all students attended the centers half time. Another variable that we had originally planned to incorporate into the analysis was whether or not students had been in the DSOP program during the previous year. The number of students who had been in the program the previous year was so small that this dichotomy could not be employed in the analysis.

Since the numbers of students who had completed the pretreatment and posttreatment measures was different from one variable to another, each of the two classification analyses of variance was carried out separately. It would have been possible to analyse all of the data in one large balanced design. However, if this had been done, many cases would have been lost that were missing data on one of the dependent variables. Use of the unbalanced design required nineteen separate analyses but permitted us to make use of a maximum amount of the available data.

In addition to comparing the gains made by students in the different centers, it was also necessary to determine whether sutdents within a given center had made a significant gain on each dependent variable during the academic year. In order to obtain this information, the significance of each gain between pretest and posttest was measured using the t-test for correlating means.

Presenting Data

The main results of the statistical analysis are summarized on the following six tables:

Table 6 - This table gives the mean scores for all students in each center who completed each measure. The main purpose of this table is to give the reader an idea of the level of

students with whom the center was working. Score levels obtained by students in the various centers will be compared with test normative data in the body of the report.

Table 7: This table gives the mean gain scores for each of the six secondary centers on each of the 19 dependent variables measured in the study. This permits the reader to compare gains made on each dependent variable, and also tells the reader the magnitude of the gains made.

Table 8: This table lists only those gains between the pre and post treatment scores for each center that were statistically significant and gives the level of significance.

Table 9: This table gives the mean squares and F ratios from the 19 analyses of variance on gains made on data from the secondary centers. These were two-classification analyses. F ratios are given on variance among centers and variance between students whose attendance at the centers was above or below average.

Table 10: This table lists those between-center differences on the dependent variables that were statistically significant.

Table 11: This table gives the mean gains made by students whose center attendance was above average as compared with those students whose center attendance was below average. The F ratio indicating the significance of the difference between these two groups is also given when the difference reaches sinificance at the .05 level or beyond.

The aforementioned analysis includes measures concerned with three major areas that were of concern to the project investigators. The first area was achievement. Learner performance related to this measure was obtained using the Wide Range Achievement Test and the Fundamental Achievement Series. The second major area, student attitude, was measured using the Demos D Scale, the Purdue Master Attitude Scale for any institution and the Purdue Master Attitude Scale for any vocation. The third major area, anxiety, was measured using the IPAT Anxiety Scale. In addition to these tests, other data were obtained that are relevant to one or more of the project's performance objectives such as attendance records, evidence on each center's holding power, and information on the racial composition of each center. The following review of the results will be organized around the project's performance objectives.

TABLE 6

Mean Pretreatment and Posttreatment Scores on Dependent Variables by Center[1]

	Eastern		Western		Central		Kearns J.H.		Central J.H.		Brockbank J.H.	
Variable	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
WRAT Reading	95.2	94.7	95.1	89.9	84.9	89.5	87.7	90.6	101.2	95.7	85.6	82.9
Spelling	85.4	84.7	83.8	69.7	77.5	82.5	79.7	79.4	89.2	85.8	78.2	80.1
Arithmatic	84.1	83.9	81.5	66.2	76.8	75.6	75.9	74.1	85.6	83.0	73.0	69.0
Demos D Scale Total	73.6	71.6	73.1	71.5	71.7	81.6	78.4	74.4	71.7	69.2	68.2	84.5
T-factor	27.1	25.6	27.7	27.4	27.0	31.3	29.2	28.7	26.9	24.6	25.9	34.5
E-factor	20.9	20.7	20.3	19.1	19.8	21.9	21.7	19.4	19.3	19.7	17.9	22.0
P-factor	12.5	12.3	12.4	12.7	12.8	14.6	14.3	13.0	12.5	12.3	13.1	14.3
S-factor	12.9	13.0	13.0	11.8	12.6	13.7	14.3	13.3	12.9	12.3	11.3	13.7
Purdue Attitude DSOP	8.5	8.2	8.4	8.3	8.4	7.6	8.4	7.1	8.2	7.8	8.3	8.8
Purdue Attitude Reg School	6.2	5.4	6.3	5.9	5.8	5.2	5.7	6.4	6.6	6.0	5.9	4.7

TABLE 6 (continued)

Mean Pretreatment and Posttreatment Scores on Dependent Variables by Center[1]

	Eastern		Western		Central		Kearns J.H.		Central J.H.		Brockbank J.H.	
Variable	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IPAT Anxiety Scale Total	5.9	5.5	6.2	6.0	6.5	6.0	5.9	5.6	5.8	5.5	7.0	6.6
Self Sentiment	5.7	5.6	5.9	5.8	5.6	5.7	5.4	5.6	5.5	5.6	6.1	7.2
Ego Strength	6.3	6.3	6.7	6.7	7.1	6.7	6.9	6.3	6.8	6.5	7.0	6.5
Protension	6.0	5.9	6.4	5.9	6.2	6.7	6.9	6.0	6.1	5.8	6.6	7.2
Guilt Proneness	5.4	5.1	5.3	4.8	6.4	5.1	5.2	4.9	5.1	4.8	6.4	6.2
Ergic Tension	6.4	6.0	6.8	6.4	6.6	6.8	6.5	6.4	6.2	6.8	7.4	6.8
FAS Verbal	74.5	78.7	72.7	76.2	61.5	68.6	66.0	66.1	77.6	82.2	55.1	68.4
Numerical	61.4	51.1	47.3	46.6	36.8	42.4	39.5	42.9	50.4	52.8	30.1	36.5
Total	123.7	129.9	118.4	122.8	98.3	110.9	105.5	103.7	128.5	134.6	85.2	105.0

[1]Pre-post mean differences on this table will not agree perfectly with Table ___. Table ___ differences were computed for all cases taking the given measure while Table ___ is limited to cases that completed both pre and post measures.

TABLE 7

Mean Gain Scores by DSOP Center

Variable	Center					
	Eastern	Western	Central	Kearns JH	Central JH	Brockbank JH
1. WRAT Reading	- 0.58	- 2.44	- 4.02	4.40	- 1.58	- 0.32
2. WRAT Spelling	- 1.67	-10.73	- 1.58	1.33	1.50	1.72
3. WRAT Arithmetic	0.01	-12.34	- 2.75	0.42	- 3.21	- 5.13
4. Demos TOTAL	- 4.67	- 1.98	- 4.72	- 4.56	7.38	
5. Demos T-factor	- 4.57	- 0.91	- 3.75	0.07	2.54	6.08
6. Demos E-factor	0.28	- 0.88	- 0.80	- 1.88	1.77	3.50
7. Demos P-factor	1.07	0.38	0.47	- 1.71	2.23	0.92
8. Demos S-factor	- 1.36	- 1.29	- 0.75	- 1.04	0.85	
9. Purdue DSOP Attitude	-1.123	- .146	-1.094	-1.000	- .558	.174
10. Purdue Regular School Attitude	- .724	- .354	.096	.464	- .658	- .415
11. IPAT Anxiety Test						
a) Total	- 1.22	- 0.09	- 0.66	- 0.25	0.14	- 0.87
b) Self Sentiment	- 0.95	- 0.07	- 0.09	- 0.17	- 0.20	
c) Ego-Strength	- 0.65	- 0.17	- 0.28	0.25	0.52	
d) Protension	2.58	- 0.84	- 1.00	- 0.67	2.36	- 1.37
e) Guilt Proneness	- 1.26	- 0.44	- 0.22	- 0.08	- 0.41	0.57
f) Ergic Tension	- 1.19	0.74	0.68	0.83	1.00	0.05
12. Fundamental Ach.						
a) Verbal	6.15	4.97	4.09	- 1.19	- 0.86	10.68
b) Numerical	1.27	2.04	3.17	8.12	1.57	2.78
c) Total	7.42	7.08	7.26	6.93	0.61	13.47

TABLE 8

Significance of Gains on Dependent Variables
From Pretest to Post Test by Center[1]

Variable	Center	N	Significance Level	Direction of Difference
1. WRAT Arithmetic	WC	24	.01 (t=3.74)	-
Spelling	WC	24	.01 (t=2.98)	-
2. Fundamental Achievement Series				
a) Verbal Score	WC	19	.01 (t=3.21)	+
	CC	24	.05 (t-2.12)	+
	BJ	11	.01 (t=5.62)	+
b) Numerical Score	KJ	12	.01 (t=4.57)	+
c) Total Score	WC	19	.01 (t=3.12)	+
	CC	24	.05 (t=2.26)	+
	BJ	11	.01 (t=4.42)	+
3. Demos D Scale[2]				
a) T-factor	CC	28	.05 (t=2.30)	-
	BJ	5	.05 (t=3.51)	+
b) P-factor	KJ	13	.05 (t=2.22)	-
	CJ	15	.05 (t=2.17)	+
4. Purdue Institutional Attitude Scale				
a) Attitude towards DSOP Center	CC	14	.05 (t=3.00)	-
	KJ	14	.05 (t=2.80)	-

[1] Significance of gain analysed using the t-test for correlated means.

[2] Low scores on the Demos D Scale are favorable.

TABLE 9

Mean Squares and F- Ratios from Analysis of Variance of Gains
Secondary Centers, 1972-73

Variable	Mean Squares by Center	Mean Squares by Attendance	Mean Squares Error	F-Ratio Center	F-Ratio Attendance
1. Wide Range Achievement Test					
a) Reading	195.16	8.60	107.85	NS[1]	NS
b) Spelling	477.65	109.30	264.23	NS	NS
c) Arithmetic	576.07	198.04	256.61	2.91[2]	NS
2. Demos D Scale					
a) Total	367.31	2.43	151.22	2.43	NS
b) T-factor	182.34	3.58	28.66	6.36	NS
c) E-factor	37.79	5.67	28.48	NS	NS
d) P-factor	13.43	11.05	7.43	NS	NS
e) S-factor	17.75	2.20	10.99	NS	NS
3. Purdue Institution Attitude					
a) DSOP Centers	237.24	211.09	178.70	NS	NS
b) Regular School	278.46	566.71	469.88	NS	NS
4. IPAT Anxiety Scale					
a) Total	2.55	7.92	5.60	NS	NS
b) Self Sentiment	1.95	9.89	6.18	NS	NS
c) Ego STrength	8.34	22.43	19.93	NS	NS
d) Protension	12.88	0.34	10.38	NS	NS
e) Guild Proneness	3.33	11.70	6.71	NS	NS
f) Ergic Tension	7.98	1.77	13.70	NS	NS
5. Fundamental Achievement Series					
a) Verbal	153.15	165.5	39.27	3.90	4.21
b) Numerical	39.66	152.24	33.74	NS	4.51
c) Total	207.53	257.24	101.79	NS	2.53

[1] NS = Not Significant

[2] $F < 2.27$ significant at .05 level; $F > 3.14$ significant at .01 level.

[3] Students with better attendance made greater achievement gains.

TABLE 10

Significant Between-Center Differences

Variable	Higher Center[1]	Lower Center	F-Ratio[2]
1. Demos D Scale			
a) T-factor	JHS[3]	HS	15.55
	EC & CC	WC	2.77
	BJ	KJ	6.95
b) E-factor	BJ	KJ	3.56
c) P-factor	BJ	KJ	3.26
	CJ	BJ & KJ	4.31
2. Purdue Institutional Attitude			
a) DSOP Attitude	WC	EC & CC	3.55
	BJ	KJ	5.71
3. IPAT Anxiety Scale			
a) Protension	EC[3]	CC	3.53
	CJ	KJ & BJ	6.25
3. Fundamental Achievement Series			
a) Verbal	BJ	KJ	19.40
	BJ	CJ	4.13
b) Numerical	KJ	BJ	4.56
	CJ	KJ & BJ	2.31
c) Total	BJ	KJ	10.43
4. Wide Range Achievement Test			
a) Arithmetic	EC & CC	WC	3.59
b) Spelling	EC & CC	WC	2.29

[1] EC = Eastern Center; WC = Western Center; CC = Central Center; HS = All high school centers; KJ = Kearns Jr. H.S.; CJ = Central Jr. H.S.; BJ = Brockbank Jr. H.S.; JHS = All junior high centers

[2] An F of 2.29 is significant at the .05 level; and 3.17 at the .01 level.

[3] Lower scores are desirable on the Demos D and the IPAT.

TABLE 11

Mean Gains Made By Students whose Center Attendance is Above Average and Below Average

Variable	Above Average Attenders	Below Average Attenders	F Ratio
1. Wide Range Achievement Test			
a) Reading	- 0.18	- 1.37	
b) Spelling	- 0.33	- 2.81	NS
c) Arithmetic	- 4.63	- 3.03	NS
2. Demos D Scale			
a) Total	- 1.34	- 2.08	NS
b) T-factor	0.75	- 0.93	NS
c) E-factor	0.12	0.54	NS
d) P-factor	- 0.09	1.22	NS
e) S-factor	- 0.37	- 1.07	NS
3. Purdue Institution Attitude			
a) DSOP Attitude	- .386	- .864	NS
b) Regular School Attitude	- .498	- .032	NS
4. IPAT Anxiety Scale			
a) Total	- 9.13	- 0.85	NS
b) Self Sentiment	- 0.37	- 0.97	NS
c) Ego Strength	0.55	- 0.68	NS
d) Protension	- 0.34	0.70	NS
e) Guilt Proneness	0.20	- 0.81	NS
f) Ergic Tension	0.38	0.32	NS
5. Fundamental Achievement Series			
a) Verbal	5.81	2.14	4.21[2]
b) Numerical	4.92	1.40	4.51
c) Total	10.73	3.54	NS

[1] NS = not significant

[2] F of 3.92 needed for significance at .05 level.

REPORT OF FINDINGS

Achievement Measures

The Wide Range Achievement Test (WRAT) standard score has a mean of 100 on a standard deviation of 15. The mean scores for students in the Granite DSOP Centers on this test are reported in Table 6. The mean subtest standard scores range from 66 to 101. All but six of these means are below the average range of 90-109 as defined by the test developer. The majority are in the "low average" range of 80-89. It may be seen in Table 7 that most of the changes between pre and post treatment measurements were small with about half of them being negative indicating that the post-treatment score was actually lower than pre-treatment score. Only two significant changes took place between pre and post testing on the WRAT (see Table 8). This was on the WRAT Spelling and Arithmetic subtests in which students at the Western Center scored significantly lower on the post-treatment measurement than they had on the pre-treatment measurement. It will be noted that these differences were quite large, approaching one standard deviation.

The WRAT provides the best evidence available in this project of the effectiveness of the various centers in bringing about improved student achievement. Taken as a whole, it must be concluded that the centers were not successful in bringing about significant achievement gains. Since Center mean scores were generally below the normative means of the tests, some upward regression would be expected on the post-tests. When this factor is considered, the failure of the centers to raise achievement significantly and, in fact, the tendency in many cases to obtain lower post-test scores is not very encouraging.

Although the Fundamental Achievement Series (FAS) deals primarily with ability rather than achievement, the investigators hypothesized that as a result of the modified curricular approaches employed in the DSOP Centers, the students would obtain significant increases in the FAS Verbal and Numerical ability scores. It was believed that such increases would reflect a "reduction of variables that interfere with optimum behavioral level functioning and academic proficiency."[1] Normative data in the test manual give mean raw scores on the Fundamental Achievement Series Verbal Scale of 70 for grade 6, 84 for grade 8, 88 for grade 10, and 92 for grade 12. It may be seen in Table 6 that both pre and post treatment scores for the DSOP Centers are well below the 50th percentile with many below the 20th percentile according to the normative data in the manual. Numerical mean scores for the Centers are also very low compared with the test norms. Several of the

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[1] See Rusk, Philip E. et. al. Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupation Programs. Dept. of Pupil Services, Granite School District: 1972.

Center means on this measure are below the tenth percentile.

In terms of gains, it will be noted that two of the centers, Kearns J.H. and Central received lower post-treatment scores (i.e., losses) while the other four made gains ranging from 4.09 to 10.68. It may be seen in Table 8 that three of the Verbal score gains are statistically significant.

Gains on the Numerical subtest of the Fundamental Achievement Series were generally somewhat lower (see Table 7). Only one of these gains, i.e., the Kearns Jr. High School Center, was statistically significant.

Three of the post score gains on the Fundamental Achievement Series total score were signficiant (see Table 8).

Between Center Analysis

The analysis of variance data designed to test overall differences between centers yielded signficant F-Ratios in the WRAT Arithmetic subtest and the FAS Verbal subtest (Table 9). When specific between-center differences were analysized (Table 10), it was found that on the WRAT Arithmetic and Spelling subtests the Western Center was significantly lower than the Eastern and Central Centers. On the FAS, it will be noted in Table 10, that there were a number of significant differences among the junior high school centers. The Brockbank Center showed greater improvement than the other two junior high school centers, although this difference was not consistent over all subtests (see Table 10).

The final achievement comparisons made were concerned with the performance of students at each center whose attendance was above average as compared with those attendance at the center was below average. Table 11 summarizes the mean gains of students in these two groups. It will be noted that there were no significant differences on the Wide Range Achievement Test. On the Fundamental Achievement Series, however, the above-average attenders obtained significantly high scores on both the Verbal and Numerical subtests.

Attitude Measures

The Demos D Scale (DDS) is an attitude measure designed for the identification of potential dropouts. This scale yields five scores: (1) A total score, (2) a score purporting to measure attitudes towards teachers (T-Factor), (3) a score measuring attitudes toward education (E-factor), (4) a score measuring influence by teachers or parents (P-factor), and (5) a score measuring school behavior (S-factor). The entire scale includes 29 items. Although reliability coefficients are not given for the subtests, it may be assumed that these coefficients are very low since all are short, with the P and S subtests containing only five items each. On the DDS, the higher the total score, the greater the probability of the subject dropping out of school. The test developers state that there is little probability that students in the score range 0 to 29 will drop out of school, some probability of dropout for those scoring

30 to 49, an even chance for those in the scoring of 50 to 69, a strong probability of dropout for those scoring from 70 to 89 and a very strong probability of those scoring 90 or above. It may be seen from the mean scores obtained by students in the various Centers that the average student in most centers score in the "strong probability of dropout" range of 70-89 both before and after attendance in a DSOP Center. The gains scores on the Demos D Scale by center are summarized in Table 7. It should be remembered that negative entries on this scale are desirable while positive gains indicate an increase probability of dropping out. For the DDS total score, only the Central Junior High School Center reported a positive change. However, because of the very high variability of scores from this center, the change was not statistically significant. It will be noted in Table 10 that there were a number of significant differences on subtests of the Demos D Scale between Centers. These differences do not appear to reflect any consistant pattern and in view of the probable low reliability of thse subtest scores, the third party evaluator does not regard any further interpretation of these scores as appropriate.

The Purdue Master Attitude Scales

The Purdue Master Attitude Scale for any institution was administered in this project to determine differences in attitudes towards regular school and towards the DSOP Centers and also to determine the significance of any improvement in attitudes as a result of attending the centers. The Purdue Scales are developed using the Thurstone attitude scaling technique. The subject responds to a series of items each of which has an established scale value. In scoring the Purdue Scales, the scorer takes the scale value of the median statement endorsed or agreed with by the student and this becomes his score on the scale. High scale values are favorable with the highest scale value being 10.3 and the lowest 1.0. The indifference point on the scales is 6.0, meaning that scores above 6.0 indicate a favorable attitude while scores below indicate an unfavorable attitude. It may be seen in Table 6 that the mean score for students in the different Centers range from 5.2 to 8.8. All means for the DSOP Centers are above the 6.0 indifference point, while half of the means for regular school are above that point. It will be noted in Table 7 that changes in student attitudes between the pre and post testing towards both the DSOP Centers and regular schools were small. Most of these changes were negative with respect to the DSOP Centers indicating that students' attitudes towards these centers became less favorable as a result of actually having been a student in the center. Attitudes toward regular school also tended for the most part to become slightly more negative between pre and post testing.

The Purdue Master Attitude Scale for any vocation was also administered to the students at the DSOP Centers. However, since students often responded to different vocations on the post test than they had responded to on the pre-test, the data did not lend itself to statistical analysis. The results of this measure are summarized in Table 12. In cases where students gave attitudes on the same vocations on the pre and post tests,

TABLE 12

Vocational Attitudes as Measured on the Purdue Master Attitude Scale - Vocations

Center	N[1]	NS[2]	Pretest Mean	Pretest Below 6.0	Post Test Mean	Post Test Below 6.0	ND[3]	Pretest Mean	Pretest Below 6.0	Post Test Mean	Post Test Below 6.0
1. EAVC	30	42	7.3	4	7.3	5	47	7.5	5	7.0	8
2. WAVC	21	19	7.5	2	7.4	2	26	6.8	4	6.8	3
3. CAVC	22	15	7.2	2	6.9	3	31	7.4	4	7.6	3
4. Kearns	4	2	8.5	0	7.8	0	7	6.7	2	7.1	1
5. Central Jr.	14	17	7.7	1	7.0	5	19	6.4	5	5.6	7
6. Brockbank	11	11	5.3	0	7.8	1	12	5.5	5	5.9	3

[1] Number of students responding.

[2] Number of vocations listed that were same on pre and post measures.

[3] Number of vocations listed that were different on pre and post measures.

the mean pretest attitude was 7.3 as compared to 7.4 after treatment. The number reporting attitudes below the indifference point of 6.0 was nine on the pretreatment measure and 16 after treatment. When students reported their attitudes on different vocations before and after training, the pre and post means were 6.7 on both occasions. There were 25 scores below 6.0 on both measures. These results indicate that the Centers had little effect upon vocational attitudes as measured by the Purdue Scale Only the program at Brockbank Junior High School resulted in any noteworthy change.

Attendance Results

One of the hypotheses of this project was that student attendance would be improved by the DSOP programs. In order to test this hypothesis, data were collected on each student's attendance during his stay at the DSOP Center and this was compared with his regular school attendance for the previous year. The results are given in Table 13. It may be seen that there was an improvement in attendance for each of the three high school centers, with Eastern and Central doing much better than Western. The results are less encouraging for the junior high school centers where only Central made a substantial gain. The overall results suggest that the DSOP Centers had a desirable effect upon attendance, especially at the high school level.

Anxiety Measures

The IPAT Anxiety Scale Questionnaire was administered to all students in the Secondary Centers in order to determine whether anxiety scores tend to lessen as a result of Center attendance. This test yields six scores; a total score and five subtest scores entitled Self Sentiment, Ego Strength, Protension, Guilt Proneness, and Ergic Tension. The reliability coefficients on the entire scale, depending on the type of reliability employed, are reported to range from .80 to .93. Reliability coefficients for the sub-scores on the other hand, are quite low ranging from .26 for Protension up to .60 for Ergic Tension. High scores on both the total and subtests indicate high anxiety. The test developers state that sten scores on the total scale of 1, 2 or 3 indicate stability, 4, 5, 6, and 7 are in the normal range with 7 becoming border line while 8, 9, and 10 indicate "definite psychological morbidity."[1] In view of the lower reliability and questionable validity of subtest scores, the third party evaluator decided that a detailed discussion of the results on these scores is undesirable. Analysis data have been provided in the tables on these scores and the reader is free to make his own interpretations. The mean sten scores for the various Centers are given in Table 6. The total score means range from 5.5 to 7.0 and are all within the "normal" range. Similarly, the sten scores for the subtests range from 4.8 to 7.4. The number of scores at each center that the test developers consider abnormal (i.e., 8, 9, or 10) are given in Table 14. It may be seen that a substantial number of students obtained high anxiety scores. The frequency of these scores dropped on the post treatment measure.

[1]Cattell, R.B. and Scheier I.H. Handbook for the IPAT Anxiety Scale Questionnaire. Champaign, Illinois: Institute for Personality and Ability Testing, 1963.

TABLE 13

Regular School and DSOP Center
Percentage of Attendance

	Eastern	Western	Central	Kearns JHS	Central JHS	Brockbank
1. Percent attendance DSOP Center	90	77.9	91	68	81.9	79
2. Percent attendance regular school	64.8	60.4	69	72.9	55	79.5

TABLE 14

Number of Abnormal[1] Anxiety Scores
on the IPAT Anxiety Scale by Center

	Eastern Center		Western Center		Central Center		Kearns		Central		Brockbank	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
IPAT Anxiety Scale Total	16	10	19	7	8	4	5	1	7	2	8	5
Self Sentiment	13	8	13	2	5	6	1	0	4	3	3	5
Ego Strength	27	21	33	13	22	10	12	4	15	6	10	5
Protension	17	15	28	6	15	8	9	2	10	6	6	5
Guilt Proneness	17	8	14	1	8	4	2	2	11	3	6	6
Ergic Tension	29	19	37	11	14	9	10	4	11	7	13	6

[1] STEN scores of 8, 9, or 10.

TABLE 15

Holding Power of DSOP Centers and
Reasons for Leaving for 1972-73 Year

Center	Reason for leaving									
	1	2	3	4	5	6	7	8	9	Total
Central	24	3	7	5	0	3	0	2	0	44
Western	18	2	16	2	3	10	4	1	0	56
Easter	43	12	3	1	0	2	0	3	2	66
Brockbank JHS	16	1	0	0	0	1	0	0	0	18
Central JHS	19	7	0	0	1	0	0	0	0	27
Kearns JHS	16	4	0	0	0	0	0	0	0	20
Redwood Elementary	9	0	0	0	0	0	0	0	0	9
Total	45	29	26	8	4	16	4	6	2	240
Percent of Total	60.5	12	10.8	3.3	1.7	6.7	1.7	2.5	.8	100

[1] 1 = Still in program

2 = returned to school

3 = take employment

4 = family left district

5 = transfer to another school

6.= dropped - reason unknown

7 = enter military

8 = graduated from H.S.

9 = left because of marriage

In terms of gains score, it will be noted in Table 7 that most changes were quite small with about two-thirds of the changes being in the direction of lower anxiety. The largest changes obtained were on the Protension subtest which suggest increased anxiety at the Eastern and Central Jr. High Centers. However, the reader will note in Table 8 that none of the changes between pre and post tests on the IPAT Anxiety Scale were statistically significant. It may be seen in Table 9 that the overall F-ratios comparing centers and attendance groups yielded no significant differences. When individual between-centers differences were analyzed, two significant differences were found, reflecting the aforementioned change toward less desirable scores on the Protension subtest at the Eastern and Central Junior High School Centers. Since no consistent results have emerged from the analysis, the soundest conclusion appears to be that the DSOP Centers had no effect upon the anxiety level of their students.

Closures

One of the objectives stated by the project staff for the 1972-73 academic level was to achieve "more closures, i.e., placement in job, reenrollment in school, combination of school/center and work."[1] Relatively little information was collected by the project staff on the project's success in achieving this objective. However, Table 15 summarizes what information is available. It will be noted that 60.5 per cent of students entering the program were still present at the end of the 1972-73 academic year. In view of the fact that many of these students were former dropouts and most of the remainder had rather high dropout potential, the holding power of the DSOP Centers is noteworthy. Furthermore, closure was achieved on an additional 27 percent of the students through return to school, employment, transfer to another school or graduation from high school. Three of the categories in Table 15, namely categories 4, 7, and 9 cannot be regarded as either favorable or unfavorable to the center. It will be noted that category 6 (dropped - reason unknown) accounts for only 6.7 percent of the student body of the centers.

Comparisons among the three high school centers show somewhat different patterns between the Central and Eastern Centers on one hand, and the Western Center on the other hand. The holding power of the Western Center was considerably lower than the other two high school centers. This center also had a much larger percentage of students in the "dropped - reason unknown" category. On the other hand, this center had placed a higher percentage of students in employment than was the case in either of the other two high school centers.

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[1]Jones, Hilda B. Interim Report, Diversified Satellite Occupation Program and Career Development. Salt Lake City: Granite School District, June 15, 1972.

TABLE 16

Racial Data by Center for 1972-73

Center	Chicano	Indian	Other	White	Total
Eastern	1	0	0	66	67
Western	1	0	2	64	67
Central	3	1	1	42	47
Kearns JH	6	0	2	13	21
Central JH	4	2	2	19	27
Brockbank	14	0	0	4	18
Redwood	1	0	0	8	9
Total	30	3	7	216	256
Percent of Total	11.7	1	2.7	84.6	100

The patterns for the three junior high school centers are very similar with virtually all students in these centers either remaining in the center or returning to the regular classroom. The junior high school centers were also highly successful in keeping potential dropouts from becoming dropouts. Only one student from the three junior high school centers is reported to have dropped.

Percentage of Non-White Students in the DSOP Program

The final performance objective stated for the project was to ". . . maintain and increase the percentage of non-white students in our program."[1] Data for the 1972-73 school year are given in Table 15. Taken as a whole, the seven centers enrolled 14.5 percent non-white students. When the junior high school and high school centers are considered separately, we find that 4.97 percent of the high school enrollment is non-white and 45.45 percent of the junior high school enrollment is non-white. During the 1970-71 academic year, the percentage of non-whites in the senior high school centers was 5.37 while the percentage of non-whites in the junior high school centers was 20.21. These results indicate that the junior high schools have made substantial progress since the initial year of the project in increasing the percentage of non-white students. The senior high schools, on the other hand, have maintained about the same percentage. It should be noted that all of the secondary centers have enrolled a substantially larger percentage of non-white students than are found in the population of the Granite School District. In view of these figures, the external evaluator concludes that the DSOP Centers have succeeded in the achievement of this objective.

The Redwood Elementary Center Results

Only two measures were administered to the students in the Redwood Elementary Center. These were the Wide Range Achievement Test (WRAT) which yields scores in reading, spelling, and arithmetic; and the IPAT Children's Personality Questionnaire which yields scores on 14 personality factors. Since there were only eight complete cases in the elementary sample, it was decided to employ nonparametric techniques for estimating significant differences. It was originally planned to analyze these data using the sign test. However, since the Wilcoxon Matched-Pairs Signed-Ranks Test is appropriate for the data and slightly more powerful, this test was used instead. The results of the analysis are summarized in Table 17 and will be reported briefly below.

The Wide Range Achievement Test

A comparison of the pre-post scores on the WRAT reading test indicated

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[1] Ibid.

TABLE 17

Significance Level of Differences Between Pre and Post Treatment Measures for Students in the Redwood Elementary Center[1]

Measure	Sig. Level	Pretest Mean	Posttest Mean	Hyp dir?
1. Wide Range Achievement Test:				
a) WRAT Reading	NS[2]	72.8	75.3	
b) WRAT Spelling	NS	70.0	72.2	--
c) WRAT Arithmetic	.01	74.6	79.5	Yes
2. IPAT Childrens Personality Questionnaire				
a) Factor A Reserved (low vs. Warmhearted (high)	.01	4.6	1.0	No
Factor B Less intelligent vs. more intelligent	.02	2.5	1.0	No
Factor C Affected by feelings vs. emotionally stable	NS	3.9	1.8	--
Factor D Phlegmatic vs. excitable	.01	6.4	2.8	Yes
Factor E Obedient vs. assertive	.01	5.3	2.3	Yes
Factor F Sober vs. happy-go-lucky	.02	3.5	1.4	No
Factor G Expedient vs. Conscientious	.01	4.4	1.6	No
Factor H Shy vs. venturesome	.05	5.0	2.8	No
Factor I Tough minded vs. tender minded	.02	7.8	5.1	Yes
Factor J Vigorous vs. Circumspect	.01	6.1	3.3	Yes
Factor N Forthright vs. Shrewd	.01	6.8	4.5	No
Factor O Self-assured vs. apprehensive	.02	7.1	4.4	Yes
Factor Q_3 Casual vs. controlled	.02	4.5	2.0	No
Factor Q_4 Relaxed vs. tense	.01	6.1	3.4	Yes

[1] Based on Wilcoxon Matched-Pairs, Signed - Ranks Test

[2] NS = not significant

that, although most pupils made small gains in the reading score, this difference was not statistically significant. Results for the WRAT spelling tests were even less impressive with five of the students making gains while three obtained lower scores on the post-test. On the other hand, all students made gains in the WRAT arithmetic with the mean gain being just under 5 points. It will be noted in Table 17 that the improvement in arithmetic achievement was significant at the .01 level. It should be remembered, however, that since the students in this sample were initially below average in achievement, some of the gains found are the result of statistical regression towards the mean.

In addition to test data, the teacher maintained detailed records on the number of assignments made and completed by students in the Redwood Center. Table 18 summarizes this information by month. It may be seen that there was a trend upwards in the percentage of assignments completed as the year progressed. These data would suggest that the Redwood program is helping students develop better work habits and should lead to better achievement by these students in future years.

IPAT Children's Personality Questionnaire (CPQ)

The project staff hypothesized statistically significant changes in a predicted direction for thirteen of the fourteen personality factors measured by this instrument. However, because of the low reliability of the factor scores and the failure of the third party evaluator to see any rationale that would tend to support many of the hypothesized personality changes, the evaluator employed two-tailed tests of significance in analysing these data rather than one-tailed tests as would usually be called for to test directional hypotheses. The results of this analysis are briefly discussed below. For a more detailed description of the factor scores, the reader is referred to the section of this report entitled Measuring Changes.

Low scores on Factor A are claimed by the test developer to be indicative of reserved, detached, critical and cool behavior while high scores are indicative of warm hearted, outgoing, participating, easy-going behavior. The project staff hypothesized that students would receive higher scores as a result of participation in the program. A statistically significant difference was obtained between the pre and post scores. Unfortunately, this difference was in the direction opposite of that hypothesized (see Table 17).

Low scores on Factor B are purported to measure less intelligent concrete thinking and lower scholastic mental capacity while higher scores measure more intelligent abstract thinking and higher scholastic mental capacity. The project staff hypothesized no significant change in this score. Analysis indicated a significant change in the direction from more intelligent to less intelligent.

A low score in Factor C is indicative of persons who are affected by feelings, emotionally less stable, more easily upset, etc' while high

scores indicate persons who are emotionally stable, face reality, are calm, and have high ego strength. No significant change occurred between the pre and post treatment scores, although the trend was strongly in the direction of lower scores on the post test.

The project staff hypothesized a significantly lower post test score on Factor D. This hypothesis was supported at the .01 level. Low scores on Factor D indicate a phlegmatic, deliberate and inactive person while high scores indicate excitable, impatient, demanding, personality.

Low scores on Factor E indicate an obedient, mild, conforming, submissive person as opposed to high scores which indicate an assertive, independent, aggressive, and dominant person. The change in Factor E was signficiant at the .01 level in the direction of lower scores on the post test in this factor. This change supported the project hypothesis.

It was hypothesized that student would obtain a significantly higher post treatment score on Factor F. Low scores on Factor F indicate a sober, prudent, serious person, while high scores indicate a happy-go-lucky, impulsively lively, gay and enthusiastic person. The results indicated a consistant trend for lower scores on the post test on this Factor. In fact, nor a single student obtained a higher score on the post test. This change was in the opposite direction than hypothesized by the project staff.

Factor G appears to be closely related to the kinds of personality changes often attempted by activities such as the DSOP program. A low score in Factor G indicates a person who disregards rules, is undependable, and bypasses obligations while a high score indicates a person who is conscientious, perservering, and rule-bound. The project staff, of course, hypothesized higher post test scores on Factor G. The results indicated a significant and consistant change towards lower scores on ths factor. In fact, every student in the group received a lower post test score.

A low score on Factor H indicates an individual who is shy, restrained, diffident, and timid, while a high score indicates a person who is verturesome, socially bold, uninhibited, and spontaneous. Analysis of the results on this factor indicated a slight tendancy in the direction of lower scores on the post test. This difference was statistically significant at the .05 level. The project staff had hypothesized a change in the opposite direction.

A low score in Factor I indicates a person who is tough-minded, self-reliant, and realistic, while a high score indicates a person who is tender-minded, dependent, and over-protective. The project staff hypothesized that students would obtain a significantly lower post test score on this factor. This hypothesis was supported at the .02 level.

A high score in Factor J is described by the test developers as being ". . . individualistic, guarded, critical of others and circumspect; while

TABLE 18

Numbers and Percentages of Assignments Completed at Redwood Elementary Center by Month

Month	Assignments Made	Assignments Completed	Percent Completed
September	513	343	66.9
October	414	240	58.0
November	354	211	59.6
December	197	144	73.1
January	429	380	88.6
February	122	99	81.1
March	264	205	77.7

the low score is more freely expressive, active, and uncritical."[1] The invesitgators hypothesized a significantly lower post test score on this factor. This hypothesis was supported. In fact, all eight of the subjects obtained lower post test scores.

A lower score on Factor N indicates an individual who is forthright, natural, artless, and sentimental while a high score is purported to indicate an individual who is shrewd, calculating and astute. Anaysis of the data on this factor indicated a consistant and significant trend towards lower post test scores. The project investigators had hypothesized higher post test scores on this factor.

The investigators hypothesized a significantly lower post test score on Factor O. A low score on Factor O indicates a person who is self-assured, placid and secure, while a high score indicates a person who is apprehensive, troubled and insecure. there was a consistent and significant trend towards lower post test scores on this factor, thus supporting the investigator's hypothesis.

The test developers stated that a child with a low Factor Q_3 score might be more frequently in trouble with school regulations, not with delinquent intent, but through carelessness or neglect. A low score in Factor Q_3 indicates a person who is casual, careless of social rules, untidy, and who follows his own urges, while a high score on Q_3 indicates a person who is controlled, socially precise, self-disciplined, and compulsive. The results indicated a significant and consistent trend in the direction of lower post test scores on Factor Q_3. This trend, of course, goes exactly counter to what would be expected to result from an effective program designed for potential dropouts. The invesitgators had hypothesized that a significantly higher post test score would be obtained on this factor.

Persons scoring low on Factor Q_4 are described by the test developers as relaxed, tranquil, and unfrustrated while persons scoring high are described as tense, driven, overwrought, and fretful. The investigators had hypothesized a significantly lower post test on this factor. This hypothesis was supported at the .01 level. The results were consistent in that every student in the group obtained a lower post test score with several of these changes being quite large.

Discussion

The third party evaluator finds it extremely difficult to interprete the results of the CPQ. There are some interesting points, however, that emerge from examining these scores. First, it is apparent that regression is not acting to any great extent in these scores since in the case of every one of the 14 scores, the post test scores are further from the usual test means than the pretest scores. An examination of the 13 significant differences on this test indicates that the results supported the investigator's hypotheses in six cases and were in the direction opposite of that hypothesized in seven cases. These results tend to support

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[1] Porter, R.B. and Cattell, R.B. Manual for the Children's Personality Questionnaire. Champaigne, Illinois: Institute for Personality and Abiliting Testing, 1968, p. 5.

the external evaluator's earlier decision to use the two-tailed test of significance in evaluating the results of this analysis. An interesting phenonenom occurred in these scores, i.e., it was found that for every one of the 14 factor scores, the post-test means were lower than the pre-test means. It is difficult to determine why this pattern occurred since low scores are sometimes desirable and sometimes undesirable. Low scores could have been obtained by failure of students to record an answer for every item on the answer sheet. However, a check of the answer sheets indicated that all questions were answered. Another factor that might have led to the strange scores on this test would be a negative attitude on the part of pupils during the test administration. Such attitudes are often the result of administering the test late in the day, administrating the test during the time when students expected to be able to participate in some preferred activity, or having a test administrator who antagonizes the students. Two of the teachers in the junior high school centers had complained about the test administrator, so perhaps this was the problem.

Another difficulty in interpreting the results of CPQ is the low reliability coefficients of the factor scores. When a single form of the test is used, as was the case in this project, the factor score reliabilities reported by the test developers range from .27 for Factor J to .54 for Factor Q_3.

When one considers the low reliability of the factor scores, the puzzling trend for students in this project to obtain lower post-test scores, and the failure of the project investigators to hypothsize more than a chance number of differences in the correct direction, it appears that the safest conclusion to draw from the aforementioned data is that the CPQ scores obtained in this project should be ignored.

FINDINGS RELATED TO THE PROCESS OBJECTIVES AND OTHER AREAS OF EMPHASIS

Introduction

In addition to evaluating the performance objectives of this project, the evaluator visited each D.O.P Center on at least two occasions in order to collect observational and interview data relevant to the process objectives and other areas where such evaluation was desirable. The evaluator also constructed a questionnaire that was completed by each center which dealt with the following areas: (1) administration of the project, (2) the career education progarm at the center, (3) quality of instructional materials produced, and (4) the impact of the project on the school system. The usual procedure carried out by the evaluator was to conduct an initial interview and observation at the center, then send the questionnaire, then after having checked the questionnaire make a second visit aimed at further observation and at obtaining information not covered in the questionnaire responses.

Central - Eastern Area Vocational Centers

Administrative Procedures

These two centers are operating in the same building and for all practical purposes, function as a single center. Data relative to project administration focused on four major questions: (1) What records are kept on each student in the center? (2) What orientation procedure was followed when a new student entered the center? (3) What procedures were used to set up an individual program in academic work and career education for the entering student, and (4) What coordination took place between the center and the central administration of the project and how effective was this administration?

The Central - Eastern Center maintains a cumulative file on each student. This includes a transcript from the previous school, a referral from the district, confidential test results, the student's program correspondence related to the students, etc. These records are kept in a locked file at the center. A check of a random sampling of these records by the evaluator indicated that they are complete and in good order.

Upon entering the center, a new student is interviewed by a staff member and placed with a teacher who is judged to be most likely to work effectively with that individual student. The center rules are discussed with the student and he is given a general overview of the center's program. The academic classes the student needs are discussed and he is introduced to the career education program. He is then given a tour of the center and turned over to the teacher with whom he will be working.

The student meets with his assigned teacher and together they develop an academic curriculum that appears to meet the student's needs. He then meets with the center director who organizes the basic career education and work experience situations with which the student will be involved.

One of the center director's visits the students on their jobs and evaluates them.

The evaluator observed the aforementioned procedures and these procedures appeared to operate effectively. Student morale seemed to be very good and most students appeared to have identified positively with the faculty. The center has only two rules. One insists on regular attendance and the other prohibits smoking on the school grounds. Thus, the students are exposed to a much less authoritarian environment than they would find in a typical high school. Students have responded favorable to this environment. On visiting this center, the evaluator found many students actively involved in a variety of projects and learning experiences.

The staff meets once a month with Mrs. Romney (the Project Director) to discuss problems and progress at the center. The central administration appears to have established a helping relationship with the center. The central administration expedites such things as requests for materials and district assistance and takes care of some of the administrative routine. The district psychologist who works part time with the project, provides help for students with psychological problems. The center staff generally perceives the central administration as being helpful in carrying out their programs. The only complaint made by staff members was that the tests administered to the students upon entering the center get back too late to be useful in diagnosis and planning the students' program. These test results generally take about four weeks to reach the center.

Program Impact

The main impact of the center on Granite School District appears to be in lowering the dropout rate and providing an alternative for students who are unable to adjust to the regular high school situations. The career education program at the district has also had some impact on the high schools being served. These schools are using some of the center materials to set up their own career education programs. It is difficult however, to assess the overall impact of the center on the four high schools from which its students normally come. There are frequent contacts between the high school counselors and center personnel. The center has established close communication with one or two counselors in each high school. However, most of these contacts appear to be initiated by center personnel. High school counselors have not visited the center during the current year. In summary, it appears that the center has made numerous efforts to influence the curriculum and career education programs of the high schools, but has not received a very substantial response from the high school faculties. It would have been desirable for the central project administration to have made a stronger effort to bring about greater impact of the center's program on the district schools.

Program Development

The evaluator gave special attention to instructional products or processes that were developed at each center. Products were examined by the evaluator and information was obtained on field testing, evaluation and revision of the products. The main product developed at the Central - Eastern DSOP Center was an individualized reading program in which students read paperback books of their choice. The program was evaluated during the initial year of the project using a single group pre-post design. Tests employed as dependent variables were the Gates MacGintie Reading Test and the Wide Range Achievement Test. Pupil gains on the WRAT Reading Subtests averaged 17 months (Significant at the .001 level). Gains on the GMRT speed and accuracy subtests averaged 15 and 16 months respectively. Both of these differences were significant at the .001 level. Since no control group was employed, it is not possible to attribute these gains with certainty to the reading program. However, it seems likely that all or most of the gains are due to this program. The program has been built around approximately 200 paperback books. The center staff has determined the reading level of each of these books. They have also written summaries of about 100 of the books. The summaries and reading level data are available on note cards. The staff has also prepared a teacher guide for use with the program. This program should probably be taken through one additional revision and evaluation employing a control group design. If this evaluation were to support the data already obtained, the program should be made available for use at other centers. This reading program is the most rigorously developed and promising product to come out of the Granite School District DSOP Centers.

Western Area Vocational Center

Administrative Procedures

Examination of the records kept on students at this center showed essentially the same sort of cumulative student record file kept at the Central and Eastern Centers. Upon entering the center, a new student is introduced to the teacher to whom he is assigned and given a tour of the building. The shop and classroom procedures are explained. A master plan is then developed for the student. This plan is designed to lead the student to graduation. A substantial number of students who enter the Western Center dropout of the program.

Observation by the evaluator at the Western Center showed some differences from the Central and Eastern Center. Staff members at the Western Center appear to be more authoritarian and to have less satisfactory rapport with students. Also, relatively fewer students were found working on individual projects, etc. during the evaluator's visit to the Western Center as compared with the other high school centers. Administrative interaction between the center and the central administration appear to be about the same as in the other high school centers. Monthly meetings are held between the center's staff and the project director. The central project staff performs about the same functions for this center such as ordering materials, etc.

Program Impact

It appears that the main impact that this program has had on the District is in taking students who have not been successful in the regular school program. Students come to the center from six high schools in the Granite School District. Some effort has been made to inform high school counselors about the program. However, the staff reports that only one or two counselors from the high schools being served have visited the Western Center this year.

Product Development

The staff at the Western Center has developed a crafts program called the "Progressive Skills Building Program". The center staff has written a brief description of this program. The basic idea behind the program is to start the student on simple crafts activities such as plastic casting, candle making, and copper enameling in order to give students a prompt success experience. The staff feels that this type of experience where the student is almost guaranteed success in producing a product which can be shown to other people results in improved student morale and rapport between the student and the teacher. After experiencing success in the crafts program, the student gradually moves into academic work that he needs in order to complete his high school graduation requirements. He may also move on into more difficult work in the arts and crafts area. The "Progressive Skills Building Program" has not undergone any sort of rigorous educational development and no evaluation data are available. The rationale for the program appears to be sound, however, and it may be that the program could eventually be developed into an educational package that could be used nationally.

Career Education

The center's career education program is concerned mainly with the investigation of different occupations and information on how to enter these occupations. The program employs speakers, field trips, discussions, and role playing. The center does not keep detailed records on students who get and keep jobs, thus the data to evaluate the career education program is limited. Much of the program is built around nine career education packets made up by the center staff mostly from materials assembled from other sources. The career education packets deal with the topics such as self-appraisal and development, preparing a resume, choosing a career, and how to hold a job. From a research and development standpoint, these packets are still at prototype level. They would require extensive evaluation and revision before they could be used with confidence in other settings.

The Kearns Jr. High School Center

Administrative Procedures

All three of the Junior High School Centers maintain essentially the same records on students. Each center keeps a cumulative record file for each student in the program. This file includes grade book entries, attendance cards, confidential test scores, program data, and so on.

The orientation procedures at the Kearns Center involve an initial interview in which the purpose of the class is discussed and the student is told why he was selected for consideration in the program. A second interview focuses primarily on getting the students' reaction to being in the DSOP program. When a student enters the program, his class schedule is changed as appears necessary. The DSOP teacher makes a major input into the student's program planning. Orientation into this program is informal and is usually conducted with the help of students who are already established in the program. Each student's academic program is individualized. Students work at their own rate or in small groups of two to four who are progressing at about the same rate. They work primarily from workbooks in mathematics, English, reading skills and career information. The DSOP class receives various kinds of administrative support from the school as well as from the Central Project Staff. As with all other centers, the teacher meets with the project director once a month to discuss problems and take care of administrative needs. The only criticism the teacher had of the central administration was in the way that the testing was handled. She stated that some students had been given the same test three or four times because the test administrator kept poor records and did not know what had been done. The teacher did not get the initial test data that had been collected in September until April. As a result, the initial testing could not be used for diagnostic purposes. The teacher also reported that the test administrator antagonized the students in the Kearns Center. This sort of problem, which also was mentioned at the Brockbank Center may have invalidated some of the tests used to evaluate the DSOP project.

Program Impact

The teacher felt that the program has had some impact within the Kearns Junior High School in that students in the program are now better accepted than they were during the previous year. She feels that some of the negative sterotypes teachers have of the DSOP students are breaking down and the students are being given a greater opportunity to participate in activities such as assemblies, dance, games, etc. Apparently, the teacher has made a major effort to gain acceptance for the students and the DSOP program at Kearns Junior High School. She is not aware of any impact that the program has made outside of the school.

Product Development

The teacher has developed units in areas such as communications and perceptions. These have been assembled mostly from commercial materials. However, these units are not formalized and are not in a form that other teachers could use. No evaluation of the units has been carried out. These materials are the typical kinds of materials developed by classroom teachers and would require extensive evaluation and revision in order to make them usable outside of this classroom.

Career Education

The career education program at Kearns is designed to help students understand vocations as dynamic and developing activities rather than as static roles. The program attempts to acquaint each student with his or her own interests, aptitudes and values. The program contains a unit concerned with the student knowing himself. He is also introduced to the World of Work concept and the interrelationship between educational achievement and vocational attainment. The program also deals with the importance of academic preparation and other aspects of preparation for the job market such as grooming, performance at the job interview, etc. The Kearns program places heavy emphasis upon career development. The teacher is well versed in the career education area and has a program that appears effective from a subjective appraisal.

Central Junior High School Center

Administrative Procedures

The Central Junior High School administrative procedures are essentially the same as Kearns. An extensive cumulative record form is kept on each student. The school counselors explain the program to the students first and then the student talks with the DSOP teacher before entering the program. The teacher keeps in close touch with other teachers who have his students during the day. He sends out a questionnaire once a quarter to help keep informed on student progress and also helps students with their work in their other courses.

The academic program is built largely around workbooks. The instructor uses a contract system of individualized instruction. Contracts are made each quarter between the teacher and the student and the teacher schedules a weekly conference to keep informed on student progress. The work done on the contract determines a student's grade. Students also participate in some group work, such as reading plays, and working on career education projects.

Program Impact

The program has had some impact on other schools in the district.

For example, the Granite Park Junior High School has been trying to develop a similar program without federal funds. However, it appears that the major impact of the program is within the Central Junior High School itself and has consisted for the most part of helping the DSOP students adjust to their other classwork, and providing a place to send disruptive students.

Product Development

The teacher has accumulated various types of supplemental materials such as magazines, games, etc. to support the regular academic curriculum, but has developed no educational products.

Career Education

Since the instructor feels that his students react negatively to textbooks, most of the career education materials are in the form of educational kits such as the SRA Occupations Exploration Kit or similar locally assembled materials. Once each week, students review one or two articles from the World of Work Kit which give details on how to get a job, hold a job, get advancement, etc. The Central Center has made heavier use of field trips as part of the career education program than is the case with the other junior high school centers. During the current year, the program has made ten field trips to various businesses in the area. As part of the program, students read about and discuss various aspects of career education. They also choose jobs which interest them out of a possible 400 and then learn which jobs they might qualify for in the future, taking into account their reading and writing ability and interests. As a result of this process, they choose eight occupations which they research in terms of the education and training required, salary, etc.

Brockbank Jr. High School Center

Administrative Procedures

Administrative procedures at Brockbank Jr. High School are essentially the same as at the other two junior high school centers. The teacher maintains a complete record file on each student. Before entering the program, each student is individually interviewed at least twice by the teacher. During the interviews, the class procedures are discussed, materials used in class are shown to the student and the teacher gives the student an idea of the kind of work and the behavior that will be expected of him. The teacher has developed a check list that is employed during orientation to make sure that all necessary steps such as completing forms, taking tests, obtaining parental concent, etc. have been completed. In the second interview, the teacher attempts to find areas in which the student feels he needs help, discusses grades, favorite classes, out of school interests and activities, etc. The academic program is individualized for the most part with each student using programmed instructional materials and working at his own level

and speed in mathematics, English and spelling. Some of the activities involve small group work particularly those concerned with crafts, communication, and career studies. The program is supported in a variety of administrative ways by the junior high school and the central project staff. The support received at Brockbank is essentially the same as reported in the other centers.

Program Impact

The main impact of the program appears to be at the local school level. The program provides a means of meeting the needs of disruptive and nonattending students, makes these students more acceptable to regular teachers and also, of course, removes the students from part of the regular school program. The DSOP teacher assumes a major responsibility for scheduling the students' regular class program and also works with teachers when students get into trouble or have problems with their school work. There does not appear to be any impact of the program beyond the Brockbank Jr. High School.

Product Development

The only educational product being developed in the program is a communication unit that has been assembled by the teacher and is based partly on published materials. The teacher has drafted a guide for this unit. The unit deals with both verbal and nonverbal communication and has been well accepted by the students. However, no evaluation data have been collected. At this point, the unit would have to be considered in the prototype stage.

Career Education

The Career Education Program at Brockbank is emphasized somewhat less than at the other junior high schools. The core of the program at Brockbank appears to be individualized academic work rather than the career development curriculum. The program does deal with some of the same topics that are dealt with in the other centers such as helping students develop a realistic view of the work process, teaching them how to apply for a job, helping them to change their attitudes toward school and learning and learning and relate school experience to job success. The program has occasional guest speakers who describe their work to the class.

Redwood Elementary Center

Administrative Procedures

The teacher at the Redwood Center maintains information on attendance, daily grades, assignments completed, achievement tests, other tests and career units covered. The record files on the elementary students are

somewhat less thorough than those maintained at the secondary centers. As part of the orientation procedure, the teacher makes home visits at the first of the year to acquaint students and parents with the nature of the program. The teacher administers pre-tests in mathematics, reading and English in order to determine areas of weakness. The individual's program is then built around needed skills.

Program Impact

The main impact of the program has been to increase the awareness at Redwood Elementary School of the need for career education at the elementary school level. The classroom is frequently visited by teachers and students from other classrooms in order to observe the activities in which the DSOP students are involved. The program, however, does not appear to have had any impact on the district outside of the Redwood Elementary School.

Product Development

The teacher has developed units on newspaper work, carpentry, and machines. Each unit includes behavioral objectives, procedures, teaching activities, pre-post tests of pupil performance, recommended field trips, and a bibliography. The teacher has collected some pre-post data on the carpentry unit and on this unit all students in the program achieved the performance objectives. He is currently working on a home management unit dealing with such subjects as keeping a checking account, etc. Examination of the units by the third party evaluator indicates that the units are promising prototypes. These units have been developed somewhat beyond the point typical for local development work done by teachers and shows potential for the use in other classrooms.

Career Education

The goals of the career education program as stated by the teacher are to improve student attitudes towards school, improve attendance and acquaint the students with a variety of job opportunities. The program makes heavy use of "hands on" activities such as making book shelves, etc. during the carpentry unit, taking a car engine apart in the classroom during the machines unit, and so on. The program also relies heavily on field trips and makes extensive use of published materials, films and film strips.

THE TOTAL EFFECTIVENESS OF THE PROJECT OVER THREE YEARS

Scope of the Review

As proposed in the evaluation plan, this review has been based primarily upon project reports and other documents produced during the first two years of the project plus both the evidence analyzed by the third party evaluator during the final year of the project. Evaluation of the first two years of the project has been based primarily upon the following documents:

(1) Cottrell, M.C. Diversified Satellite Occupation Program, First Year Evaluation. Salt Lake City: Granite School District, 1971.

(2) O'Neil, Riley. The Effectiveness of the Diversified Satellite Occupation Programs and the Career Development Program in the Granite School District. Provo, Utah: Brigham Young University, unpublished doctoral dissertation, May 1972.

(3) Call, John R. Interim Report, Diversified Satellite Occupations Program. Salt Lake City: Granite School District, June 30, 1971.

(4) Kennington, N.C. and Keene, R. Interim Report, Diversified Satellite Occupations Program and Career Development. Salt Lake City: Utah State Board of Education, June 15, 1972.

(5) Jones, Hilda B. Interim Report, Diversified Satellite Occupations Program and Career Development. Salt Lake City: Granite School District, June 15, 1972.

This three year review will be organized around the project objectives and will discuss briefly evidence collected over the three years that is relevant to each objective. Since other portions of this evaluation report cover the third year of the project in detail, little but the essence of the third year results will be given here.

Objective 1 - Improved attitudes towards school

First year results on the Demos D Scale for the secondary centers indicate an average pre-post change of -3.94 on the total test. It will be remembered that low scores are desirable on this measure. The greatest change took place at the Eastern Center where post-test mean was 5.56 points lower than the pretest mean. The first year evaluator provided no information on statistical significance of these changes. Nearly all of the pre-post changes on subtest scores on the Demos D Scale were very small and although no information is given on statistical significance, it appears highly unlikely that any of these changes reached significance.

The only subtest to show a moderate change between pre and post testing was the Demos T sub-score. This score also accounted for nearly all of the change obtained in the total score. Student attitudes towards the teacher as measured by this score became slightly more favorable.

Changes at the Junior High School Centers on the Demos D Scale were generally in the direction of less favorable attitudes. However, these changes were very small and it is doubtful if any of them reached statistical significance. No significant tests were reported by the first year evaluator on any of the dependent variables.

During the 71-72 academic year results on the Demos D Scale showed that after completing the program, junior high school males had considerably less favorable attitudes on the total scale score as well as on the P, E, and S subscales. Junior high school females also had less favorable attitudes, although only in the case of the E subscore was this difference statistically significant. A weakness of the second year analysis was that data were not broken down by center as was done in the first and third year's analyses.

The pattern for high school students was somewhat better, with high school males reporting significantly more favorable attitudes on the total score, the T subscore and the P subscore of the Demos D Scale. High school females reported significantly more favorable attitudes on the total score and the T subscore.

During the third year of the study, significantly more favorable attitudes were obtained on the T subscore at the Central Center and the P subscore at Kearns Junior High School. However, significantly less favorable attitudes on the T subscore were obtained by Brockbank Junior High School students and less favorable attitudes on the P subscore were obtained by the students at Central Junior High School. When the data for the three years are pooled, there appears to be no consistent pattern indicating more favorable attitudes towards school as a result of attendance at the DSOP Center. Only at the high school level during the second year were fairly large favorable changes reported.

Objective 2 - Lessening of Anxiety

The IPAT Anxiety Scale was employed to measure changes in anxiety during each of the three years of the project. This scale yields a total score which is a combination of five factor scores, i.e., Self Sentiment, Ego Strength, Protension, Guilt Proneness and Ergic Tension. During the first year of the study, the results on the IPAT Total and Factor scores showed very small changes between pre and post-testing. Although no data are given by the first year evaluator on the significance of these changes, the inspection of the data and comparison with significance tests made during the second and third year would indicate that none of the changes on the total or any of the subtest scores were statistically significant.

During the second year of the study, scores for males and females were analyzed separately. Differences again were very small and only one of the 24 statistical comparisons made on the IPAT was significant. The

significant change was in the direction of more favorable sten score for high school males on Ego Strength. Although this difference was statistically significant it amounted to less than one sten score and probably has no practical significance.

During the third year of the study, none of the pre-post gains made on the IPAT total score or any of the factor scores reached statistical significance. Taken together, the only conclusion that seems appropriate regarding anxiety level changes as measured by the IPAT Anxiety Scale is that attendance at the DSOP Centers has had no effect whatsoever upon level of anxiety.

Objective 3 - Raising the Achievement Level

The Wide Range Achievement Test (WRAT) was employed to measure gains in achievement levels during all three years of the project. This instrument yields subtest scores in reading, spelling, and arithmetic. Standard scores were employed in analysis of this study having a mean of 100 and a standard deviation of 15. However, during the first year of the project, grade level scores were employed rather than standard scores. The overall average grade level gain made in reading during the initial year of the project was .58. However, students at the Western Center made virtually no gain on this test while students at the Central Center gained an average of 1.25 years. With regard to spelling achievement, the average gain for the three high school centers was 1.21 years. Again, the Western Center was the weakest, actually showing a loss of .58 years between pre and post test. The Eastern Center made by far the greatest gain of 1.82 years. Results on the arithmetic subtest showed an average gain for the high school centers of .60 years. The Central Center led with a gain of 1.98 years while the Western Center and Eastern Center reported very small gains. Some of the gains reported during the first year could have been due to regression since the overall average grade placement score of students in the high school centers was only 7.41, placing them more than two grade levels behind in academic achievement.

Achievement results for the junior high school centers on the reading subtest indicated an average gain of only .18 grade levels. Two of the centers actually obtained lower scores on the posttest and only the Kennedy Junior High School Center reported a resonably substantial gain of .89 grade level years. Average gains on the spelling subtest for the four centers was only .19 years, with the Westlake Junior High School Center making the most substantial gain (1.2 years). On the arithmetic subtests, the four centers again averaged a gain of only .19 years. The greatest gain was .52 years at the Kennedy Junior High School while students at Central Junior High School lost .41 years in arithmetic achievement during the 70-71 academic year.

During the second year of the study, no significant differences were reported between pre and post-test scores on any of the three WRAT tests for either high school males or females. Junior high school males made a significant gain on the WRAT arithmetic test. On the other tests, neither junior high school males or females made any significant improvement during the second year of the project on any of the WRAT scores.

Objective 6 - More Closures, placement in job, re-enrollment in school, combination of school-center and work

No data were presented relative to this objective for the first year of the project. During the second year of the project, the Minnesota Satisfaction Questionnaire and the Minnesota Satisfactoriness Scales were used. Results on these two scales were very close to the national norms reported in the text manuals. This would suggest that student job satisfaction and employer satisfaction with the DSOP students was normal which can be considered a favorable result for students drawn from dropout and potential dropout populations.

Some data on the holding power of the centers also seems somewhat relevant to this objective. Data were reported for the three high school centers during the second year of the project. At the Central Center, 59 percent of students entering the program withdrew and 41 percent completed the year. At the Eastern Center, 32 percent withdrew and 68 percent completed the year while at the Western Center 51 percent withdrew and 49 percent completed the year. The holding power results were somewhat more favorable for the third year of the project. During the final year, 60.5 percent of the students enrolled were still in the program at the end of the year. Furthermore, many of the withdrawals actually involved favorable closures as referred to in the objective. During the third year, 27 percent of the students enrolled made such closures, and only 6.7 percent dropped from the programs.

Objective 7 - To maintain and increase the percentage of non-white students in the program

During the initial year of the project, the senior high school centers enrolled 5.37 percent non-white students as compared to 3.57 percent of non-white students for the district as a whole. At the junior high school level, the overall student population included 4.51 percent non-white students while the DSOP Centers enrolled 20.21 percent.

During the third year of the study, the high school centers enrolled 4.97 percent non-white students while the junior high school enrolled 45.45 percent non-white students. The results suggested that although the high school centers are enrolling a greater proportion of non-white students than exist in the Granite student population as a whole, they made virtually no progress towards increasing this number over the three year span of the project. In contrast, the junior high school centers made a great deal of progress in this respect. It seems legitimate, however, to conclude that the centers have generally been successful in attracting non-white students into their programs.

When data from the three years are taken together, it must be concluded that the DSOP Centers have generally failed in bringing about significant achievement gains. In view of the fact that these programs typically employed individualized instruction, small student-teacher ratios and large amounts of supplemental materials these results are rather disappointing. Coupled with this is the fact that since students were well below average, some gain would have been expected due to regression alone. For the most part, even this spurious gain failed to materialize.

Objective 4 - More Positive Attitude Towards Vocational Choices

Measures aimed at testing the attainment of this objective were not administered during the first and second years of the project. During the third year, the Purdue Master Attitude Scale for vocations was administered. Comparison of pre and post-test means for student attitudes towards vocations that they had selected showed no improvement and, in fact, the overall picture indicates slightly less favorable vocational attitudes on the post-test than those obtained on the pretest. However, the most defensable conclusion based on the evidence from this scale would be that the centers had no effect, either positive or negative, on the vocational attitudes of their students.

Objective 5 - Improved Attendance

During the 70-71 year, attendance at the three high school centers improved from an average of 74.01 percent for the prior school year when the students were in the regular classroom to an average of 82.88 percent. This is an average gain of 8.87 percent during the year that students were attending the high school centers. The pattern was found to be somewhat different for the junior high school centers. Most of these actually had drops of attendance for the year that students were at the DSOP Center. Only the Kearns Junior HIgh School Center which had an attendance gain of 12.31 percent showed a favorable change. The total for all six centers was -.54 percent, indicating that overall virtually no change in attendance had occurred.

Attendance averages were not reported for the second year of the project. During the third year, the high school centers made attendance gains ranging from seven and one-half percent for the Western Center to 25.2 percent for the Eastern Center. Results for the junior high school centers showed a slight drop in attendance for Kearns and Brockbank and a substantial gain of nearly 27 percent for the Central Junior High School Center. When data from the first and third year of the project are considered it must be concluded that the high school centers have generally brought about substantial improvement in student attendance as compared with the attendance of the same students the previous year in regular school. On the other hand, the junior high school centers have with a few exceptions been unable to bring about any substantial improvement in student attendance.

SUMMARY OF THE REPORT

Evaluation

Analysis Procedures

Three main analysis techniques were employed in the evaluation of the DSOP project. In order to determine whether significant gains had been made by each center between the pretest and the post-test on the dependent variables, t-tests for correlated means were computed. In order to determine whether differences in gains among the secondary centers were significant, nineteen two-classification analyses of variance on gains were carried out. These analyses also determined whether students who were in the upper half of each group on percentage of attendance were significantly different than students who were in the lower half on this variable. Analysis of the data from the Redwood Elementary Center was carried out using Wilcoxon Matched-Pairs Signed-Ranks Tests to determine the significance of differences between pre and post-treatment performance of students on each dependent variable. This is a nonparametric analysis technique which is appropriate in view of the fact that there were only eight students with pre-post test data in the elementary center.

Pre Post-Treatment Comparisons

Comparisons between pre and post-test data for each dependent variable in each center yielded fifteen significant changes. Six of these were negative, i.e., indicating the change from a more favorable to a less favorable score, and nine were positive. Nine of these differences were on the two achievement measures, i.e., the Wide Range Achievement Test and the Fundamental Achievement Series. All seven of the significant gains on the Fundamental Achievement Series were positive. The two changes on the Wide Range Achievement Test were both negative, and indicated serious achievement loses in arithmetic and spelling for students at the Western Center.

The Demos D Scale was employed to measure changes in attitude towards school and school related variables. Four significant changes were found on this scale, two favorable and two unfavorable. The Purdue Master Attitude Scale to measure attitude toward any institution was employed to measure student attitude towards the DSOP Center and the regular school. Two significant changes were found on this scale, both in the direction of less favorable attitudes towards the DSOP Centers on the post-treatment administration of the measure.

Between-Center Differences

Analysis of differences in gains made between centers revealed 18 significant differences. For the high school centers, the only significant achievement differences were that the Eastern and Central Center both made significantly greater gains in the WRAT arithmetic and spelling scores than the Western Center. Five differences were found among junior

high school centers on the Fundamental Achievement Series. There was no consistent pattern, however, for one center to obtain higher scores than the others, although there was a slight trend favoring the Brockbank Junior High School Center. On the Demos D Scale, there were six significant between-center differences. The first reflected the tendency for the high school students to make more favorable attitude changes than the junior high school students. Among the junior high schools, Kearns Junior High obtained the most favorable scores. There were two significant differences between centers on the Purdue Master Attitude Scale which measured attitude toward the DSOP Centers. The Western Center suffered a significantly smaller net loss on this scale than the Eastern and Central Centers. Brockbank Junior High School made a slight gain on this scale while Kearns Junior High School made a substantial loss. The difference between these two centers was statistically different. On the IPAT Anxiety Scale, there were two significant center differences. On the Protension factor, the Central Center obtained a significantly more favorable score than the Eastern Center, and among the junior high centers, Kearns and Brockbank made a more favorable change than Central Junior High.

The evaluation also included comparisons between students whose attendance at the DSOP Center was above average and those whose attendance was below average. These comparisons yielded only two significant differences. These differences indicated that the students whose attendance at the centers was above average made significantly greater gains on the Fundamental Achievement Series Verbal and Numerical scores than students whose attendance was below average. No other significant differences were obtained in this phase of the analysis.

The Purdue Master Attitude Scale for any vocation was used to determine if the Center's Career Education Programs improved vocational attitudes. This test failed to yield any consistent pattern for students in the DSOP Centers. It appears that the centers have no effect upon vocational attitudes as measured by this instrument.

Closure and Holding Power

The centers showed considerable holding power during the 1972-73 school year. Over 60 percent of students enrolled were still in the program at the close of the year. Only 6.7 percent of the students dropped the program (reason unknown). The program achieved desirable closure on 27 percent of students enrolled.

Increase in Non-White Enrollment

The high school centers continue to enroll about five percent non-white students, which is substantially above the non-white percentage for the district as a whole (about 3.5 percent at high school level). However, the high school centers have made no gains in this percentage since the initial year of the project (see Table 15). In contrast, the junior high school centers enrolled over 45 percent non-white students during the 72-73 school year, which is more than double the percent

enrolled during the initial year of the project. The third party evaluator concludes that the centers have been successful in achieving this objective.

Results for the Redwood Elementary Center were analyzed using the Wilcoxon Match-Pairs Signed-Ranks Test. Results of the analysis of the Redwood Elementary Center indicated that students had made a significant gain on the WRAT Arithmetic test. There are no significant differences on the pre and post-test means on the WRAT reading or WRAT spelling. Thirteen of the fourteen factors on the IPAT Children's Personality Questionnaire were statistically significant. However, no meaningful pattern appeared from these differences. Of the thirteen directional hypotheses made by the project staff, six were supported and seven were rejected. Students obtained lower post-test scores on all fourteen of the IPAT factors, suggesting that some sort of biasing had occurred in the administration or scoring of this test. The external evaluator checked, but has been unable to determine with any certainty what happened to the results of this test. In view of the questions surrounding this test, it would be unwise to draw any conclusions from the data.

APPENDICES

APPENDIX A

GRANITE SCHOOL DISTRICT DROPOUT STATISTICS

1970-71

GRANITE SCHOOL DISTRICT
340 East 3545 South
Salt Lake City, Utah 84115

During the 1969-70 school year, 780 high school students withdrew from high school prior to graduation. That number constituted a new high for the number and percent of students who dropped out within the Granite School District. That number helped provide motivation for the Granite School District's participation with the federal government and with the State of Utah in a program of dropout prevention through utilization of state and federal funds. In capsule form, three small Career Development Centers were established within the Granite School District wherein actual dropouts were placed for further academic schooling and vocational training.

As indicated in Table 19, 191 dropouts were enrolled in the training centers. Of the 191 students enrolled, all but 37 held for further schooling or high school graduation. Had additional centers and staff been available, a larger number of dropouts would have been enrolled as opportunities for re-enrolling dropouts exceeded capacity for doing so.

The effect of the centers upon high school dropout statistics is demonstrated through examination of Tables 20 and 21. Without the centers, the names of 154 students would be added to the 597 withdrawing during the 1970-71 school year. Table 22 gives a breakdown on the reasons given by the students who dropped out during the 1970-71 school year. The reader is cautioned to avoid the assumption that the 153 students dropping for reasons of marriage include any unwed mothers. Unwed mothers are schooled through the Granite School District program for homebound or hospitalized students. (See separate report dated June 15, 1971)

TABLE 19
AREA VOCATIONAL CENTERS

DROPOUT PREVENTION-CAREER DEVELOPMENT

CENTER	REGISTERED	ACTIVE STUDY/WORK	GRADUATES	TRANSFERRED	DROPOUT
*EAVC Upland Terrace	96	66	7	9	14
*CAVC Blaine	48	30	1	7	10
*WAVC 3572 West 3500 South	47	23	0	11	13
TOTALS	191	119	8	27	37

* Eastern Area Vocational Center
Central Area Vocational Center
Western Area Vocational Center

TABLE 19
AREA VOCATIONAL CENTERS

DROPOUT PREVENTION-CAREER DEVELOPMENT

CENTER	REGISTERED	ACTIVE STUDY/WORK	GRADUATES	TRANSFERRED	DROPOUT
*EAVC Upland Terrace	96	66	7	9	14
*CAVC Blaine	48	30	1	7	10
*WAVC 3572 West 3500 South	47	23	0	11	13
TOTALS	191	119	8	27	37

* Eastern Area Vocational Center
Central Area Vocational Center
Western Area Vocational Center

TABLE 20
GRANITE SCHOOL DISTRICT
NUMBER AND PERCENT OF HIGH SCHOOL DROPOUTS
1970-1971

HIGH SCHOOL	ADJUSTED 2ND WEEK ENROLLMENT	NUMBER OF DROPOUTS	PERCENT OF DROPOUTS
Cottonwood	1,779	77	4.33
Cyprus	1,393	73	5.24
Granger	1,419	88	6.20
Granite	2,048	117	5.71
Kearns	2,141	154	7.19
Olympus	1,876	36	1.91
Skyline	2,790	52	1.86
TOTALS	13,446	597	4.44

TABLE 21
GRANITE SCHOOL DISTRICT
COMPARISON OF NUMBER AND PERCENT OF HIGH SCHOOL DROPOUTS
1969-1970 to 1970-1971 SCHOOL YEARS

HIGH SCHOOL	ADJUSTED 2ND WEEK ENROLLMENT		NUMBER OF DROPOUTS		PERCENT OF DROPOUTS	
	69-70	70-71	69-70	70-71	69-70	70-71
Cottonwood	----	1,779	----	77	----	4.33
Cyprus	1,528	1,393	97	73	6.34	5.24
Granger	1,523	1,419	129	88	8.40	6.20
Granite	2,558	2,048	211	117	8.24	5.71
Kearns	2,438	2,141	171	154	7.01	7.19
Olympus	2,458	1,876	58	36	2.36	1.91
Skyline	2,987	2,790	114	52	3.81	1.86
TOTALS:	13,504	13,446	780	597	5.78	4.44

TABLE 22
GRANITE SCHOOL DISTRICT
NUMBER, GRADE, SEX, AND GIVEN REASONS
FOR
HIGH SCHOOL DROPOUTS
1970-1971

SCHOOL	NUMBER	GRADE			SEX		REASONS GIVEN					
		10	11	12	M	F	Dislike of school	Non-attend	Employment	Military	Marriage	Other
Cottonwood	77	24	19	34	47	30	6	33	20	3	10	5
Cyprus	73	23	26	24	39	34	12	17	11	4	19	10
Granger	88	18	36	34	55	33	16	18	10	5	25	14
Granite	117	28	55	34	58	59	7	21	14	10	42	23
Kearns	154	37	55	62	82	72	21	35	23	9	36	30
Olympus	36	5	13	18	21	15	2	9	10	1	10	4
Skyline	52	8	25	19	21	31	1	16	4	3	11	17
TOTALS	597	143	229	225	323	274	65	149	92	35	153	103

APPENDIX B

SUMMARY FOR THE 1972-1973 ACADEMIC YEAR

Synopsis of Recommended Psychometric Assessment Procedures
for the Career Development and Diversified
Satellite Occupations Program

SYNOPSIS OF RECOMMENDED PSYCHOMETRIC ASSESSMENT PROCEDURES FOR THE CAREER DEVELOPMENT AND DIVERSIFIED SATELLITE OCCUPATIONS PROGRAMS

SUMMARY FOR THE 1972-1973 ACADEMIC YEAR

In the following summary of testing and evaluation procedures to be used in the CDP/DSOP programs for the forthcoming scholastic year, focus is primarily placed upon abbreviated classification of instruments and their administration time limits. Furthermore, a list of those procedures now being used for evaluation by the Utah State Board of Education (Division of Research and Innovation), is summarized; these assessment procedures will not be used in CDP/DSOP evaluative schedules for the coming 1972-1973 school year.

SECONDARY PSYCHOMETRIC EVALUATION:

I. The Wide Range Achievement Test: 1965 Edition (WRAT)
Measures academic proficiency and accomplishment, an individually administered standardized test.

. . . . . Administration Time Required: 20 to 40 minutes

II. The Demos D Scale:
Measures attitudes which may be the precursors of behavior indicative of dropping from school, a group administered standardized self-report multiple-choice inventory.

. . . . . Administration Time Required: 15 to 40 minutes

III. The Purdue Master Attitudes Scales:
Measures attitudes toward attitude objects as indicated in titles of the various scales:

A. Scale to Measure Attitude Toward Any Occupation

B. Scale to Measure Attitude Toward Any Institution

Both of these scales are group administered standardized self-report attitude scales.

. . . . . Administration Time Required: 10 to 20 minutes

IV. The IPAT Anxiety Scale, 'Self-Analysis Form':
Measures the degree of anxiety, in general and in five etiological factors, operating in the personality; a group administered standardized forced-choice self-report inventory.

. . . . . Administration Time Required: 20 to 30 minutes

V. The Fundamental Achievement Series:
Measures intellectual and knowledge competencies in a unique psychometric numerical and verbal pragmatic approach and based on experiences assumed to be familiar to both the disadvantaged

and advantaged personality; a group administered standardized instrument.

. . . . . Administration Time Required: 30 minutes

ELEMENTARY PSYCHOMETRIC EVALUATION:

I. The Wide Range Achievement Test, 1965 Edition (WRAT)
Measures academic proficiency and accomplishment, an individually administered standardized test.

. . . Administration Time Required: 20 to 40 minutes

II. The IPAT Children's Personality Questionnaire, (CPQ)
Measures fourteen distinct dimensions or traits of personality yielding a general assessment of personality development, a group administered standardized self-report multiple-choice personality inventory for children.

. . . . . Administration Time Required: 40 to 50 minutes

CURRENT (1971-1972) TESTING AND EVALUATION PROGRAM TO BE DISCONTINUED

I. The Kuder E Interest Inventory, standardized group inventory.
. . . . . Administration Time Required: 45 to 55 minutes

II. The Gates-MacGinitie Reading Test, standardized group test.
. . . . . Administration Time Required: 45 minutes

III. Student Data Form, non-standardized data form
. . . . . Not a psychometric procedure, no time requirement

IV. Student Behavior Rating Form: non-standardized rating scale
. . . . . Administration Time Required: 45 to 55 minutes

V. Teacher Questionnaire, non-standardized teacher questionnaire
. . . . . Time Required: 50 to 60 minutes

*VI. The Minnesota Importance Questionnaire, standardized group test.
. . . . . Administration Time Required: 50 to 60 minutes

VII. The Minnesota Satisfactoriness Scale, standardized group scale.
. . . . . Administration Time Required: 30 to 40 minutes

VIII. The Minnesota Satisfaction Questionnaire, standardized group test.
. . . . . Administration Time Required: 25 to 35 minutes

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*Deleted from Spring Evaluation . . . offered by Granite School District as an optional protocol to Career Development Centers

Psychological Services
Career Development and Diversified Satellite Occupations Programs
Granite School District

Proposed Psychometric Evaluation Schedule For Autumn Quarter of the Academic Year 1972-1973

Test/Evaluation	Initial Dates to Administer	Scoring by:	Dates to Submit to Psychological Services	Type of Psychometric Procedure	Use to be Made of Test	Statistical Analyses and Compilation by	Administrative Time Required
The Wide Range Achievement Tests, 1965 Edition[1,2,4]	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Academic Achievement	To determine characteristics of students in program relative to academic achievement	To be determined by Administration	20 - 40 minutes
The Demos D Scale [2,3]	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality self-report attitude scale	To determine proneness of students to drop from school and the analysis of contributing factors	To be determined by Administration	15 to 40 minutes
The Purdue Master Attitudes Scales[2,3] a. Toward any Institution b. Toward any Vocation	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality self-report special purpose attitude survey	To determine students' attitudes toward program and certain vocations	To be determined by Administration	5 to 10 minutes per scale

Proposed Psychometric Evaluation Schedule For Autumn Quarter of the Academic Year 1972-1973

(Continued)

Test/Evaluation	Initial Dates to Administer	Scoring by	Dates to Submit to Psychological Services	Type of Psychometric Procedure	Use to be Made of Test	Statistical Analyses and Compilation by	Administrative Time Required
The IPAT Anxiety Scale, "Self-Report Form2,3,4	During 1st two weeks of Academic year	Psychologist for DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality clinical self-report inventory	To determine levels and origins of anxiety, assessment of personality compensatory progression and defenses	To be determined by Administration	20 to 30 minutes
The Fundamental Achievement Series (FAS-"verbal", FAS-"Numerical"2,3	During 1st two weeks of academic year	Psychologist of DSOP-CDP	At completion of scoring (during third week of Academic year)	General Mental Ability, group intellectual assessment	To determine academic aptitude intellectual functioning of DSOP-CDP students	To be determined by Administration	30 minutes
The IPAT Children's Personality Questionnaire IPAT CPQ1,3,4	During 1st two weeks of academic year	Psychologist for DSOP-CDP	At completion of scoring (during third week of Academic year)	Personality clinical self report inventory	To determine relative strength of separate personality traits and factors contributing to anxiety	To be determined by Administration	40 to 50 minutes

1 Elementary level
2 Secondary level
3 Group Administrated Test
4 Individually Administrated Test

APPENDIX C

Career Education Texts

CAREER EDUCATION TEXTS

Career Education, A Handbook for Implementation.

Report to Congress, Training America's Labor Force: Potential, Progress, and Problems of Vocational Education. Department of HEW by the Comptroller General of the United States, October 18, 1972.

Abstracts of Exemplary Projects in Vocational Education, Department of HEW, Bureau of Adult, Vocational and Technical Education, January 11, 1972.

Theories of Career Development. Samuel H. Osipow, Appleton-Century-Crofts, 1968.

Career Opportunities Encyclopedia (five volumes).

Job Information Series.

Jobs in Your Future - Scope.

Post-Secondary Programs.

Occupational Outlook Handbook.

Occupational Information Booklets.

Job Facts - SRA.

Encyclopedia of Careers.

About Marriage and You - SRA.

Barron's Profiles of American Colleges.

Dictionary of Occupational Titles.

American Trade Schools Directory.

Breakthrough for Disadvantaged Youth.

Careers - Modern Offices.

Sound Filmstrips:

If You Are Not Going to College

Jobs for High School Students

Four Who Quit

High School Course Selection and Your Career

Dropping Out: Road to Nowhere

Getting and Keeping Your First Job.

APPENDIX D

BIBLIOGRAPHY

BIBLIOGRAPHY

Utah State Dropout Study - An Interim Report.

Report of Project Success - Orientation and Guideline, 1968-69.

Audiovisual Instruction, Media and the Culturally Different. December, 1969, pp. 21-22. Pub. by the Department of Audiovisual Instruction, Inc., an affiliate of the NEA.

Annual Report, 1966-67, Vocational Education, Granite School District, Salt Lake City, Utah.

Profiles in Quality Education, 150 Outstanding Title I, ESEA Projects, U. S. Department of Health, Education & Welfare, p. 76.

Berman, Mark L. Some Considerations in the Education of Indigenous Groups of the Southwest. Pub. by Systems Development Corporation, Santa Monica, California, 1965.

Inside Education. October, 1969, as contained in "Education Recaps" November, 1969.

The Salazar Family: A Look at Poverty. A documentary 16 mm. film/sound. Produced by Jeff Nye. Photographed in the Redwood area of Granite School District, Salt Lake City, Utah.

Social and Cultural Characteristics of Mexico-American Families in South El Paso, Texas, December 27, 1968, p. 1. Published by New Mexico State University, Las Cruces, New Mexico.

National Conference on Educational Opportunities for Mexican-Americans, Proceedings. April 25-26, 1968, p. 19. Published by Southwest Educational Development Laboratory, Austin, Texas.

Dropouts: Prevention and Rehabilitation. National School Public Relations Association, 1972.

Rusk, Philip E. Proposed Psychometric Assessment Procedures and Evaluation for the Career Development and Diversified Satellite Occupations Program in the Granite School District: Paradigm for the 1972-1973 Academic Year, sponsored by Reed M. Merrill, Ph.D., Professor, Department of Education, University of Utah (Salt Lake City: Granite School District Press, August 14, 1972).

APPENDIX V

VITA: HILDA B. JONES

VITA

HILDA D. JONES, ED.D.

EDUCATION:	
Universities attended:	Brigham Young University University of California University of Utah
DEGREES RECEIVED:	B.S. Brigham Young University Masters University of Utah Ed.D. University of Utah
PROFESSIONAL ORGANIZATIONS:	Fellow, American Association on Mental Deficiencies. Council for Exceptional Children. Council for Administrators for Special Education.
PROFESSIONAL ACTIVITIES:	President, Utah Chapter Council for Exceptional Children, 1963. State Exceptional Child Chairman, Utah Congress, P.T.A., 1964. Past President of the Council for Administrators for Special Education. Presently serving on Community Services Council. Regional Committee for Deaf-Blind (Denver). State Committee for Utah, Title III.
PROFESSIONAL POSITIONS:	Regular teacher, Elementary Schools, Beaver Lake School District, Idaho, Jordan School District, Utah. Special Education teacher, Jordan School District. Visiting instructor, University of Nevada, University of Utah. Present position: Director of Special Education, Granite School District, Utah.
AWARDS:	Special Educator of the Year Award, 1969.

APPENDIX F

MATERIALS DEVELOPED

MATERIALS DEVELOPED

Film Strips and Tapes:

Elementary level - job awareness, "Policeman"

Lesson plans - elementary, "Engines," "Cities."

Junior High
Lesson plans and units in careers.

Senior High
Reading Program
Parent Follow-up Questionnaire
Lesson units and plans:
Art
Multiple phases of careers
Contracts for behavior modification

Forms:

Granite District Referral form
Testing inventory
Checklists
Individual file folder
Individual Assessment form
Student Follow-up form